Grizzly Bears and Their Management in the Western Bitterroot Ecosystem

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Abstract

Grizzly bears (*Ursus arctos horribilis*) were extirpated from central Idaho's Bitterroot Ecosystem (BE) by 1946. After a failed attempt to reintroduce grizzlies to the BE in the 1990s, individual grizzlies have been documented in the region since 2007, dispersing from other established populations to the north. To explore BE residents' tolerance towards grizzlies and their management and who they trust and do not trust for grizzly management, this research uses interviews and focus groups to collect data that can inform proactive conservation and management efforts amidst potential natural recovery. Results indicate: (1) distrust of management agencies and conservation organizations that stems from general perceptions of untrustworthiness and the wolf reintroduction that occurred in central Idaho in the mid-1990s, (2) trust-building preferences, including accessible staff and participatory opportunities, and ways for agencies and organizations to increase perceptions of trustworthiness, (3) intolerance towards management that stems from perceptions of an inequitable constitutive process that excludes BE residents from decision-making, potential threats from Endangered Species Act regulations, and a lack of clarity about current and future management plans, (4) preferred actions to increase tolerance towards management, including a decentralized decision-making process, educational outreach about grizzlies, and a hunting season, (5) intolerance towards grizzlies that stems from safety, economic, and cultural concerns, and (6) tolerance towards grizzlies that stems from appreciation and the belief in their right to exist. These findings suggest that improved communication efforts about management intentions and a more equitable constitutive process may address issues of social injustice and some of the material and non-material costs of grizzly presence to improve BE residents' tolerance and foster more trusting relationships.

Keywords: grizzly bears, carnivore management, trust, tolerance, constitutive process

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Dedication

To my family for all their support and countless phone calls while I walked to and from campus

To Scott and my CNR friends for being an amazing grad school and pandemic support system

To Otter for endless stress snuggles

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Chapter 1: Introduction

Over the past two hundred years, many large carnivore populations globally have significantly decreased. Population declines in large carnivores typically stem from anthropogenic causes, such as hunting, reduction of food sources, and habitat loss or degradation (Ripple et al., 2014). Grizzly bear (*Ursus arctos horribilis*) populations have lost 94% of their original range in the conterminous United States since European settlement in the nineteenth century (United States Fish and Wildlife Service [USFWS], 2021). Prior to European settlement, the grizzly bear population for the conterminous U.S. was an estimated 50,000, but the population estimate as of 2020 is 1,923 grizzlies in four subpopulations (USFWS, 2022). Grizzlies historically inhabited the Bitterroot Ecosystem (BE) of central Idaho, but the last trace of that population was seen in 1946 (Moore, 1996).

In response to the grizzly population decline in the conterminous US and a citizen petition, the United States Fish and Wildlife Service (USFWS) listed grizzlies under the Endangered Species Act (ESA) in 1975. The USFWS approved the Grizzly Bear Recovery Plan in 1982 (which was revised in 1993), and the Interagency Grizzly Bear Committee (IGBC) was formed in 1983 to oversee the plan and coordinate management efforts (MacCracken et al., 1994). The plan aimed to recover and de-list grizzly populations in six ecosystems: the Greater Yellowstone Ecosystem (GYE), the Northern Continental Divide Ecosystem (NCDE), the Selkirk Ecosystem (SE), the Cabinet-Yaak Ecosystem (CYE), the North Cascades Ecosystem, and the BE (USFWS, 1993; Fig. 1). The USFWS conducted an environmental impact statement (EIS) in the 1990s regarding grizzly recovery in the BE and two of the alternatives proposed reintroduction via relocation of grizzlies from other regions as opposed to hoping for natural recovery (USFWS, 2000). However, regional tolerance towards grizzlies, limited social license, and political administrations with varying goals created significant obstacles to reintroduction. Polarized interest groups and dissimilar value systems between affected publics led to delays and the threat of lawsuits. Ultimately, the EIS alternative for the reintroduction of an “experimental, nonessential” population of grizzlies is still the Record of Decision; however, a lack of funding and USFWS support in the early 2000s prevented any further progress on the plan (Dax, 2015; USFWS, 2021).

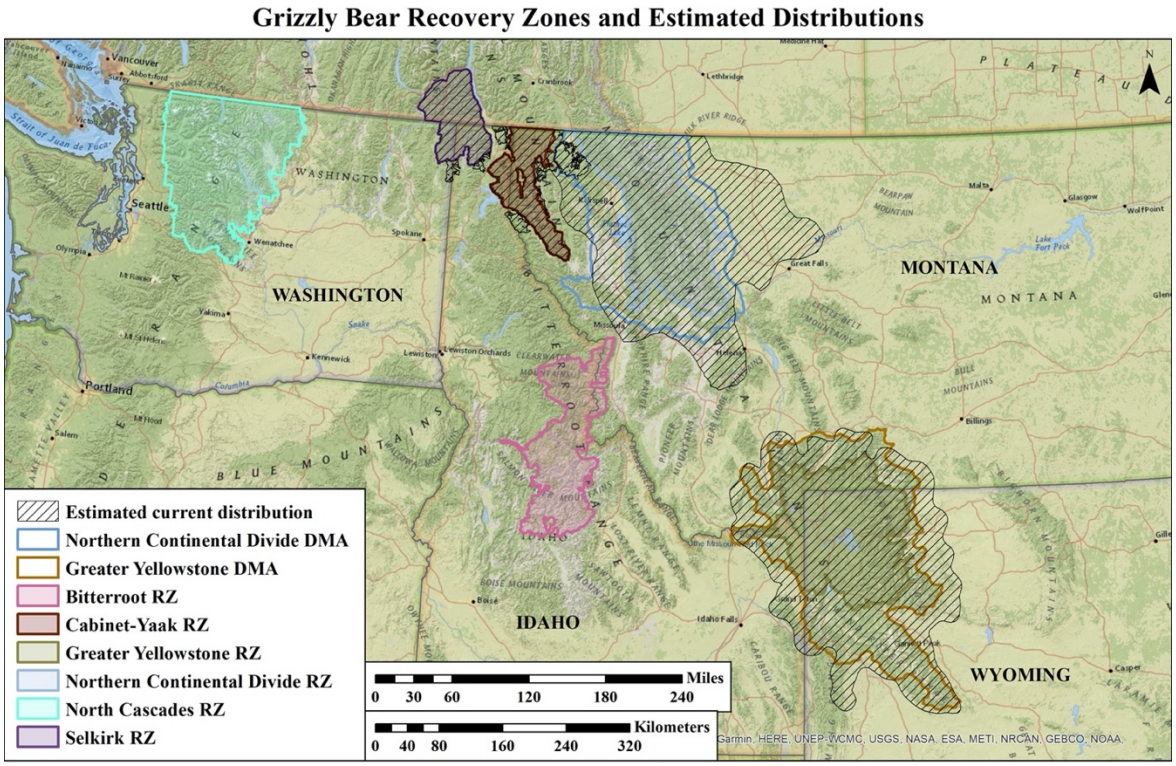

Figure 1.1 Map of grizzly recovery zones and estimated distribution areas (USFWS, 2020).

Another obstacle to re-inhabitation is trust, given that "social trust in [a] management agency is an integral component in establishing cooperation between the agency and the public and influences the public's support of management decisions" (Sponarski et al., 2014, p. 303). Mistrust in an agency can arise if constituents feel that the agency ignores public input or if institutional actors prioritize self-preservation over successful management (Lute & Gore, 2014). Greater trust in a management agency can lead to lower perceived risks and higher perceived benefits, which may in turn influence tolerance towards wildlife (Bruskotter & Wilson, 2014). Research has found that attitudes towards other large carnivores are partially determined by social trust in the management agency (Sponarski et al., 2014). However, establishing trust in management agencies among BE residents may prove exceptionally challenging given the local history of wildlife management, including a contentious reintroduction of the gray wolf (*Canis lupus*) in central Idaho in the mid 1990s.

Currently, an increased need to address the challenges of trust and tolerance towards grizzlies among BE residents is emerging as grizzlies start to reappear in the BE. Since 2007, management agencies have confirmed several cases of grizzlies from the CYE, SE, and

NCDE within or just outside of the BE. In places, there are only a few miles separating the distribution of bears in the NCDE from the BE recovery zone (USFWS, 2022). As grizzlies begin to re-enter the BE, the opinions and values that led to previous contention and polarization witnessed in response to the initial reintroduction plan may reignite. A lack of empirical evidence of BE residents' opinions on grizzlies and their management exacerbates the difficulty of effectively managing a potential natural recovery of grizzlies in the BE.

The purpose of this study is to inform proactive conservation and management efforts as grizzlies reappear in the BE by addressing research gaps that remain about BE residents' opinions towards grizzlies and their management. The research questions of this study are twofold: (1) what are BE residents' opinions towards grizzly bears and their management, and to what extent do these create cognitive or institutional barriers or facilitators to tolerance? and (2) which people, organizations, or agencies do BE residents identify as trusted managers of grizzly bears and champions of community management preferences? These objectives will be addressed via a mixed methods design of interviews and focus groups. Thondhlana et al. (2020) found that employing qualitative methods can help "capture people's historical, political, and cultural contexts," which allows for a better understanding of the non-material costs of conservation (p. 6). Incorporating contextual information and addressing non-material costs can generate further tolerance towards grizzlies and conservation efforts in the BE (Thondhlana et al., 2020). Ultimately, proactive management and conservation efforts could assist in the establishment of the BE as a habitat corridor that connects the other subpopulations of grizzlies in the conterminous U.S. and increase their genetic viability for long-term survival (Boyce & Waller, 2003).

Chapter 2: Conceptual Background

Grizzly Populations and Protections

Prior to European settlement, the grizzly bear's range covered most of the western two-thirds of North America (MacCracken et al., 1994). As settlers expanded westward, human-grizzly interactions increased. Anthropogenic causes, such as "livestock depredation control, habitat deterioration, commercial trapping, unregulated hunting, and protection of human life," led to a sharp decline in grizzly populations (USFWS, 1993, p. 9). The historic BE grizzly population also declined after a dam built on the Clearwater River in 1927 eliminated salmon from the river's drainage and removed a prominent food source for the grizzlies. Unregulated hunting and government-funded eradication efforts ultimately led to grizzly extirpation from the BE (Moore, 1996; USFWS, 2022). Habitat loss or degradation forced remaining grizzlies in the conterminous U.S. to concentrate in the four modern subpopulations in the NCDE, GYE, CYE, and SE (there are no known grizzly populations in the North Cascades Ecosystem as of 2020; USFWS, 2022).

Recovery Zone	Population Estimate
Yellowstone Ecosystem and Demographic Monitoring Area (DMA)	727
Northern Continental Divide Ecosystem and DMA	1,092
Cabinet-Yaak Ecosystem	60
Selkirk Ecosystem[a]	>44
North Cascades Ecosystem	0
Bitterroot Ecosystem	0

[a]Estimate for the U.S. portion of the ecosystem.

Table 1.1 Grizzly bear population estimates in 2020 (USFWS, 2022).

Based on population declines, habitat loss, minimal to no interconnectivity among subpopulations, and a citizen petition in response to these changes, the USFWS listed grizzlies in the conterminous U.S. as a threatened species under the ESA in 1975. The 1982 Grizzly Bear Recovery Plan, later revised in 1993, included the BE as an ecosystem of focus for recovery; the IGBC supported this designation in 1994 based on studies of the region that indicated suitable habitat for grizzlies (USFWS, 1993). Because of the section 10(j) amendment to the ESA and the current lack of grizzly inhabitation of the BE, a reintroduced population could be considered "non-essential, experimental," which was the case in the preferred alternative of the EIS and the Record of Decision (but note that since the alternative was never implemented, any grizzlies that disperse into the BE have full ESA protections; USFWS, 2021). The "non-essential, experimental" designation relaxes some standards and allows for more flexibility with recovery, which helped mitigate some opposition to gray wolf

reintroduction (MacCracken et al., 1994). While this allows for some compromise between conflicting interest groups regarding grizzly recovery in the BE, it has also ignited new points of contention. Interest groups associated with extractive industries have supported the designation because of relaxed land use restrictions, but conservation interest groups have expressed concerns that the grizzlies would not be sufficiently protected (Dax, 2015). In addition, there is the challenge of collaboration between state and federal agencies, which may have differing administrative and philosophical goals (Fischer & Roy, 1998). It is increasingly important to address these conflicting interests to facilitate more effective management and conservation efforts as grizzlies have recently begun to reappear in the BE.

Tolerance

As humans and large carnivores increasingly share landscapes once again, one central goal of large carnivore conservation is human-carnivore coexistence. Although conceptualizations of coexistence vary across scholarly literature, Carter and Linnell (2016) conceptualize the term as:

> a dynamic but sustainable state in which humans and large carnivores co-adapt to living in shared landscapes where human interactions with carnivores are governed by effective institutions that ensure long-term carnivore population persistence, social legitimacy, and tolerable levels of risk (p. 575).

Human-carnivore coexistence does not necessitate the elimination of risks from carnivores, rather, it hinges on humans accepting the risks (Expósito-Granados et al., 2019). Social and institutional factors can influence the ways in which humans and large carnivores adapt to the other's presence, which can impact which risks people perceive as tolerable as well as carnivore population numbers (Carter & Linnell, 2016).

As suggested by Expósito-Granados et al. (2019), coexistence can be conceptualized as an umbrella term under which tolerance is situated. Research has found human tolerance to be equally important as ecological limits in determining the density, distribution, and long-term survival of large carnivores (Brenner & Metcalf, 2020; Bruskotter & Wilson, 2014). Despite the recognized importance of tolerance, wildlife management and conservation scholarly literature rarely includes a consistent definition of the term. There is also a lack of standardization with the relationship between the terms of tolerance and acceptance, although many studies use them synonymously (Knox, 2020). Bruskotter et al. (2015) suggest that acceptance and tolerance represent the same paradigm; they involve passive restraint until inaction transforms into an action that is detrimental to either an animal or population. Hughes et al. (2020) found various conceptualizations of "tolerance to coexist," including some

participants who defined the concept as an absence of grizzlies in populated and human-dominated landscapes; such sentiments coincide with the phenomenon of “not in my backyard” (p. 7). Herein, tolerance is defined as “accepting wildlife and/or wildlife behaviors that one dislikes” (Brenner & Covelli Metcalf, 2020, p. 262).

Tolerance (and intolerance) can be assessed in three forms: (1) attitudes (e.g., opinion of a species or conservation action), (2) normative beliefs (i.e., belief in what ought to be done), and (3) behaviors (e.g., intentional killing, signing a petition; Bicchieri & Xiao, 2009, Brenner & Covelli Metcalf, 2020, Bruskotter et al., 2015). Bruskotter et al. (2015) found an association between attitudes and behaviors, with attitudes towards some large carnivores moderately correlating with past behaviors towards a species (r = 0.44-0.47) and strongly correlating with intentions for future behaviors (r = 0.73-0.80). This aligns with the theory of planned behavior (TPB), which postulates that attitude is one of the key predictors for behavioral intentions. However, attitudes alone are often not sufficient to predict behavioral intentions and behaviors; in the TPB, subjective norms and perceived behavioral control are also key predictors (Ajzen, 1991). In the field of conservation, Zubair and Garforth (2006) found that subjective norms and perceived behavioral control were key predictors for pro-conservation behavior. A literature review by St John el al. (2010) supports the importance of considering all three predictors to predict behavioral intentions and behaviors in the field of conservation, in addition to considering the action, the context, and the time scale of the behavior of interest.

Perceived risks and perceived benefits of wildlife partially determine tolerance of a species. Perceived risk is based on subjective perceptions rather than statistical probabilities and expresses how likely an individual believes they are exposed to a threat. If threats are perceived to be imposed upon people, threaten their personal safety, are uncontrollable, or are unfamiliar, perceived risk is exacerbated. Perceived benefit results from the recognized gains of a threat, rather than the actual features or nature of the threat (Dickman, 2010; Zajac et al., 2012). Affect, defined as “one's instinctual and emotive response to a species,” works at the subconscious level to influence perceived risks and benefits (Bruskotter & Wilson, 2014, p. 161). Research has also found inherent dread to be a key factor influencing risk perception and tolerance towards a species (Dickman, 2010). In addition, factors, such as experience with and knowledge of a species, values, and socioeconomic demographics, can affect the point at which risks are deemed to be of a tolerable level (Lute & Carter, 2020). In general, an increase in perceived benefits has been found to increase tolerance, while an increase in perceived risks has been found to decrease tolerance (Zajac et al., 2012). However, research

suggests that perceived benefits can act as stronger predictors of tolerance than perceived risks. Therefore, to increase tolerance, it is important to emphasize the benefits of a threat rather than solely focusing on risk reduction (Bruskotter & Wilson, 2014).

Several studies have found that people tend to have positive attitudes towards grizzly bears, although people who had a negative personal experience, experienced grizzly damage, or live adjacent to a grizzly population expressed fewer positive attitudes. People have formed positive attitudes based on beliefs that grizzlies are important to the ecosystem, an icon of nature, aesthetically pleasing and charming, intelligent, and have a right to exist as a species (Kaczensky et al., 2004; Kellert, 1994; McFarlane et al., 2007). These beliefs represent perceived benefits such as a healthy ecosystem, biodiversity, and recreational opportunities (e.g., wildlife viewing). Objective knowledge about a species can also influence attitudes. Research suggests that increased knowledge about a species is correlated with greater positive attitudes towards the species (Glikman et al., 2012; McFarlane et al., 2007). Therefore, efforts to increase residents' objective knowledge of grizzlies may be a vital component of management strategies.

Overall, tolerance is a complex construct, and tolerance towards grizzlies can vary depending on population and demographics. Certain populations, including farmers and rural residents, have expressed lower tolerance levels towards carnivores than other groups (Kansky et al., 2014). Natural resource dependent groups, lower socioeconomic groups, older people, and men are also less likely to support grizzly conservation and preservation (Kellert, 1994). Rural and extractive natural resource dependent groups have expressed "concerns over reduced economic activity and job losses, impacts on the rural way of life, reduced autonomy in management decisions, livestock predation, human safety, and impacts on game species such as deer and elk" (McFarlane et al., 2007, p. 277). Farmers, ranchers, and other rural residents are more likely to rely on extractive industries, more likely to share a landscape with grizzlies, and are therefore more likely to experience the impacts of grizzly presence and management regulations. Rural residents, who live, work, and recreate on the landscape with grizzlies, may experience conflicts over land access or land use restrictions (McFarlane et al., 2007).

Idaho's economic roots are tied to the use of natural resources for human benefit (e.g., mining, timber, agriculture, and ranching; Putsche et al., 2017), and grizzlies that naturally re-enter the BE would have the full protections of the ESA, increasing the possibility of restrictive regulations on land use. This has previously provoked distress and anger among resource dependent groups (Reading et al., 2002). Even though fewer Idahoans currently work in

extractive industries than in the past, ties to extractive industries are often linked with Idahoans' sense of cultural identity (Putsche et al., 2017). In addition, since rural residents have an increased risk of exposure to grizzlies, they may have an increased perception of risk for their personal safety. Perceptions of grizzlies as a threat to personal safety has been found to be a principal factor in determining a person's attitudes, and therefore tolerance (Kaczensky et al., 2004). Fear about the threats to cultural identity and personal safety represent the non-material social costs of wildlife conservation, which are frequently overlooked. Non-material (i.e., intangible) costs have been found to be significant predictors of tolerance in South Africa (Kansky et al., 2016). Research is needed to identify whether such social costs present cognitive barriers to tolerance towards grizzlies among BE residents, as conservation efforts that address and attempt to mitigate non-material costs often garner more local support (Thondhlana et al., 2020). Identifying institutional and cognitive barriers to tolerance in the historical context of specific populations is key to long-term coexistence with grizzlies and can help foster community support for conservation and management (Young et al., 2015).

In conjunction with the development of the grizzly reintroduction plan for the BE in the 1990s, research was conducted on BE residents' opinions in 1995; 62% of local residents supported grizzly reintroduction to the BE, while 26% of local residents opposed reintroduction. Two years later, a follow up study was conducted to re-evaluate BE residents' opinions; 46% of local residents supported reintroduction and 35% opposed reintroduction (Duda, 1998). Although these results show the opinions towards reintroduction as opposed to natural recovery, the trend towards increased opposition over time is noteworthy. People are more likely to tolerate perceived risks that are voluntarily accepted as opposed to imposed risks; this may affect BE residents' opinions on the potential natural recovery of grizzlies in the BE versus their opinions on the previous plan for reintroduction (Dickman, 2010). Therefore, further research is needed regarding BE residents' opinions towards the natural recovery of grizzlies. The lack of current empirical evidence about BE residents' opinions that may create institutional and cognitive barriers to tolerance towards grizzlies presents a challenge to successful grizzly management in the BE. Since tolerance is a key factor to the survival of large carnivores, it is important to address this knowledge gap amidst the recent confirmed sightings of grizzlies in the BE.

Constitutive Decision Making and Trust

Decision making is a complex, multifaceted process which consists of *ordinary*- "conventional, everyday science and management, typically focusing on biophysical matters" (Clark et al., 2014, p. 263) and *constitutive* decision making- "deliberations and choices

regarding how policy and other decisions should be made and, by implication, who ought to be involved in choosing" (p. 263). A constitutive decision-making process entails deciding who is included and excluded in decision-making, the organization of institutions, and which institutional actors have authority. This process in large carnivore conservation establishes how efforts and goals will represent common interests and ensure that adherence to common interests is enforced. Common interests, especially high priority common interests which affect numerous individuals, should be prioritized over special interests, which affect only a select few individuals. To do so requires understanding the cultures and values of all affected publics (Clark & Vernon, 2017). Because constitutive decision making determines how ordinary decision making will subsequently ensue, it is essential that institutional actors consider the constitutive process as a part of large carnivore conservation.

A contentious issue, such as large carnivore conservation, requires addressing many conflicting interests. Federal and state governments may disagree as to who has or should have the authority for wildlife management. Further, agencies typically dictate which institutional actors are involved in the constitutive process, which may intentionally or inadvertently exclude people or groups of opposition and the public. Research has found that those excluded from the decision-making process felt that the enacted policies and associated values were imposed upon them (Clark & Vernon, 2017). Excluding a person or group's values may make the person or group feel devalued. Devaluing and disregarding the public, especially the rural residents who are typically the people most affected by wildlife conservation policies, can lead to distrust in and alienation from government and illegal actions among residents, such as poaching (Clark et al., 2014).

Trust is a principal factor in wildlife management, as it can influence the acceptability of management decisions and public compliance (Schroeder et al., 2017; Sharp et al., 2013). For example, in a study by Clark and Vernon (2017), participants identified problems of government mistrust to hamper conservation efforts more than scientific problems in some instances. The concept of trust has been defined in a variety of ways in the natural resources management literature (Coleman & Stern, 2018). Social trust has been "conceptualized as one's willingness to rely on those who have the responsibility for making decisions and taking management actions," and plays an important, yet often overlooked, role in conservation (Zajac et al., 2012, p. 1333). Trustworthiness, a distinct construct from trust, "refers to the characteristics of the trustee (i.e., the person being trusted) upon which the trustor's intentions are built" (Sharp et al., 2013, p.1247). Three core constructs have been found to shape a trustee's trustworthiness: ability, benevolence, and integrity (Mayer et al., 1995).

Differentiating between trust and trustworthiness can be useful for management agencies as an agency's trustworthiness impacts its constituents' willingness to rely on the agency (Sharp et al., 2013). This is of concern in wildlife management as increased trust in a management agency was found to produce increased perceived benefits, ultimately leading to increased tolerance towards a species (Zajac et al., 2012).

Issues of trust resulting from a flawed constitutive process can also lead to mistrust in science and the rationale for an ESA listing (Hughes et al., 2020). These factors emphasize the importance of understanding constituents' opinions and values. Management agency trust is partially determined by how closely an individual perceives their values to align with those of the agency (Cvetkovich & Winter, 2003). Management agencies can build trust by strengthening positive relationships and welcoming input from the public (Sponarski et al., 2014) and foster mistrust if affected publics perceive an institutional actor to be more concerned with self-preservation than management and conservation efforts (Lute & Gore, 2014). Given the effect of trust and trustworthiness on the implementation and acceptance of conservation efforts, it may be beneficial for management agencies to establish a representative constitutive process.

An equitable constitutive process to manage grizzlies could mitigate conflicts between different interest groups but may be challenging due to the various entities involved. Grizzlies are currently federally managed due to their listing under the ESA. The Selway-Bitterroot Wilderness and the Frank Church-River of No Return Wilderness, which are federally managed by the United States Forest Service (USFS) and the Bureau of Land Management, lie within the BE. However, the Idaho Department of Fish and Game (IDFG) provides on the ground management such as handling problem bears and confirming sightings. In addition, IGBC, which includes members from various federal and state agencies, county commissioners, and a representative for the Nez Perce Tribe, also supports grizzly recovery and delisting. Non-governmental organizations (NGOs) with grizzly conservation agendas, such as Yellowstone to Yukon Conservation Initiative (Y2Y), represent additional entities. Residents that live within the BE comprise the broad public interests to be considered. Various conflicts, mistrust, and dissimilar value systems among affected publics create obstacles to an equitable constitutive process, which can hinder conservation and management efforts.

Since grizzlies have begun to reappear in the BE, it is important to identify trusted agencies, people, and organizations for their management and community management preferences, which could provide legitimate representation for BE residents as participants in the constitutive process. Such champions will understand the culture and values of residents,

which will help to ensure that their input and common interests are represented. Diverse representation can lead to an increasingly fair distribution of the costs and benefits of grizzly management (López-Bao et al., 2017). Given the variety of affected publics, transparency and trusted champions could facilitate more successful conservation efforts and mitigate management conflicts in a region where residents are unaccustomed to sharing a landscape with grizzlies.

Large Carnivore Natural History and Management in the BE

Grizzly Bear. The BE has been a focus of grizzly recovery efforts for several reasons. The BE is the greater ecosystem surrounding the recovery zone identified in the EIS. It includes parts of four National Forests (the Nez Perce-Clearwater, Bitterroot, Lolo, and Salmon-Challis), two wilderness areas (the Frank Church- River of No Return and Selway-Bitterroot), and private land (USFWS, 2022). Field surveys have concluded that the BE offers the seven characteristics necessary for grizzly habitation: space, isolation, sanitation, denning, safety, vegetation types, and food (Fischer & Roy, 1998). This conclusion is further supported based on the healthy grizzly population in the BE prior to anthropogenic extirpation. The BE is the largest expanse of roadless wilderness in the conterminous U.S. (Fischer & Roy, 1998), which is significant because of the mortality risk that roads present to grizzly populations (Proctor et al., 2015). An analysis by Boyce and Waller (2003) predicted that the BE could provide a slightly superior habitat for grizzlies than the GYE due to fewer roads and places of human activity. Studies have estimated that the BE could support a population of 200-400 grizzlies (Fischer & Roy, 1998). The BE recovery goal is set at about 280 grizzlies, based on “the target for the minimum number of unduplicated females with cubs in the first recovery criterion” (USFWS, 2022, p. 94). This would substantially increase grizzly population numbers below the Canadian border.

Beyond supplemented population numbers, the BE could also assist with needed ecological connectivity for grizzlies (Hilty et al., 2020). The NCDE is of sufficient size to ensure genetic health, but there has been no evidence of connectivity between the GYE and other subpopulations. Although the population estimates for the GYE are large enough to avoid immediate genetic concerns, they are still “approaching, but have not yet achieved levels…that would support long-term genetic viability” (USFWS, 2022, p. 172-173). This population could benefit from gene flow provided by connectivity, as this isolation was one of the reasons the delisting of the GYE population was overturned in 2018 (*Crow Indian Tribe v. United States,* 2018). Isolation is a potential threat for the SE and CYE populations, but signs of recent increased connectivity are promising (USFWS, 2022). Proctor et al. (2015)

recommended that grizzly management work towards enhancing habitat connectivity to promote subpopulation interchange to increase the chances of long-term survival. Linkage areas with low road densities are especially important. The BE, which has low road density, could act as both core habitat and ecological corridor with grizzlies in the GYE, connecting them with the northern subpopulations (Hilty et al., 2020). The EIS states that there is a "significant reduction in the probability of extinction for grizzly bears in the United States with a restored Bitterroot population" (USFWS, 2000). However, both local residents' tolerance towards grizzlies and trusted, supported grizzly management is critical to the success of grizzly re-inhabitation in the BE.

Wolf. Gray wolves were historically common throughout the Northern Rocky Mountain region. However, decreased ungulate populations, habitat loss, and government sponsored predator control programs led to their extirpation from the western United States by 1930 (USFWS, 1994). Wolves were listed under the ESA in 1973. In 1987, the Northern Rocky Mountain Wolf Recovery Plan was approved. In 1993, the USFWS developed a draft EIS, which proposed reintroducing wolves into central Idaho and Yellowstone National Park if two naturally occurring packs were not found. After the EIS was completed in 1994, the alternative signed into the Record of Decision stated that fifteen wolves would be reintroduced every year for three to five years as an "experimental nonessential" population. The goal was to recover and delist wolves, which would require ten breeding pairs of wolves (about one hundred wolves) in each of the three recovery areas (central Idaho, Yellowstone National Park, and northwestern Montana, where wolves were naturally dispersing from Canada) for three consecutive years. However, the plan was contentious from the start with opposition from local interests, such as ranchers, and Congressional representatives, although some contention was mitigated with the "experimental nonessential" designation (Idaho Department of Fish and Game [IDFG], n.d.; Perry, 2012; USFWS, 1994).

By 1995, the first wolves were trapped in Canada and reintroduced into central Idaho. The plan to reintroduce wolves from Canada was and still is controversial because many people believed there were still native wolves in central Idaho, and it would be illegal to introduce a non-native species. The EIS states that, based on taxonomic work, the historic wolves in Idaho were slightly smaller than those found in Canada but also mentions research indicating that all wolves throughout northern North America are genetically the same species (USFWS, 1994). A study by Hebblewhite et al. (2010) found a "clear lack of evidence for the genetic legacy of any remnant 'native' wolf population," which "should effectively lay to rest a

growing public concern among the anti-wolf public that re-introduction is illegal because it re-introduced a non-native subspecies, the 'Canadian' wolf" (p. 4384).

By 2002, the Northern Rocky Mountain wolves had achieved their recovery goal (IDFG, 2017). Over the next several years, the USFWS and Idaho, Montana, and Wyoming made plans to transition management to the states, although this was delayed by Wyoming's inadequate plan. In 2008, the USFWS' delisting rule was finalized, and management was transitioned to the states (IDFG, n.d.). However, the delisting was litigated by environmental groups and was overturned in 2009 (Perry, 2012). In 2011, wolves were once again delisted, and that ruling remains upheld for the Northern Rocky Mountain wolf population (although wolves outside of this distinct population segment in the conterminous U.S. have been relisted; *Defenders of Wildlife v. U.S. Fish and Wildlife Service*, 2022)

The wolf population in Idaho steadily increased in the following years and by 2020 there were an estimated 1,556 wolves in the state (Phillips, 2021). However, the environmental and economic impacts detailed in the EIS were only based on a population of one hundred wolves and Idaho is only federally mandated to maintain a population of at least 150 wolves (Phillips, 2021; USFWS, 1994). IDFG (2017) declared that the two main concerns with wolf management were livestock depredation and ungulate predation. Elk populations were and are still of particular concern to both residents for hunting opportunities and to the state for economic reasons, given the state's revenue from hunting licenses (Wilson, 2006). IDFG reports that elk populations in the state are "limited by a variety of factors and it is the combination of habitat quality, predation, and other prominent influences such as hunting and climatic conditions" that determine population sizes (IDFG, 2017, p.8). However, wolves, in addition to cougars and black bears, are the primary predators of elk throughout Idaho. There is also evidence that wolves offer social and economic benefits, such as a decrease in deer-vehicle collisions and the potential to reduce the prevalence of chronic wasting disease in ungulates (Brandell, et al., 2022; Raynor et al., 2021). Ongoing conflicts between biological goals and political goals have positioned wolves as a very contentious issue in the state of Idaho, and the northern Rockies states concede that the human dimensions of wolf management are a challenge (Wilson, 2006). With the reintroduction of wolves into central Idaho, the region's history of wildlife management has created a unique context for wildlife agencies to manage the reappearance of another large carnivore, the grizzly bear.

Chapter 3: Methods

Study Area

The expansive size of the BE combined with the region's low road density present significant obstacles to travel. For these reasons, this study is limited to communities in the western region of the BE. This study focuses on communities in Idaho and Clearwater Counties (in addition to the part of Kamiah also in Lewis County). The communities of focus include: Grangeville (population 3,308), Elk City (population 170), Orofino (population 2,656), Kooskia (population 514), and Kamiah (population 1,117; U.S. Census Bureau, 2020). These particular communities were identified as key communities by Y2Y and IGBC representatives; they serve to provide a sampling of perspectives from across the western front of the BE to generate exploratory data in communities that are all uniquely positioned and accustomed to living on a landscape without grizzlies.

Although extractive and land-based industries have played a key role in Idaho's history and still shape many Idahoans' personal identities, the actual percentage of Idahoans employed in these industries has significantly decreased (Putsche et al., 2017). As of 2021, the industries with the highest employment in Clearwater County are education and health services and public administration. Only 6% of jobs are in the natural resources and mining industries (Idaho Department of Labor, 2021a). In Idaho County, the industries with the highest employment are education and health services and trade, transportation, and utilities. Less than 6% of jobs are in the natural resources and mining industries (Idaho Department of Labor, 2021b). Both counties have primarily rural populations (58.6% of Clearwater County and 80.6% of Idaho County), which is a demographic that has been associated with lower tolerance levels towards grizzlies (United States Census Bureau, 2010). The estimate of private land ownership is estimated at 31% for Clearwater County and 15% for Idaho County (with the vast majority of Idaho county owned by the US Forest Service), which may introduce values about private land ownership and federal versus state regulation (USFWS, 2000).

Research Design

To examine the western BE's opinions on grizzlies and their management, and to identify trusted champions for grizzly management, this study uses an exploratory mixed methods design consisting of semi-structured personal interviews followed by community focus groups (Creswell & Plano Clark, 2018). Because there is a lack of empirical data for the BE region, qualitative methods were used to capture the full range of BE residents' opinions and experiences. Dickman (2010) recommends that cultural, socio-economic, and ecological contexts are considered as part of wildlife management, and qualitative methods can allow

for the preservation and understanding of such contexts while generating rich, exploratory data (Creswell, 2007; Rust et al., 2017). Interviews can empower participants and allow them to focus on what they deem to be of importance; this may better address a knowledge gap by revealing issues that were not previously considered by the researcher and that would have been missed on a structured survey (Rust et al., 2017; Young et al., 2018). Focus groups allow for insights on collective views and can further clarify previous data (Nyumba et al., 2018). Further, Thondhlana et al. (2020) indicated that qualitative methods and data are beneficial for wildlife management and conservation research as they can account for and provide a better understanding of non-material and social costs. In this study, qualitative methods were not used to gather generalizable findings; rather, the qualitative methods allowed for a deep exploration of a complex issue, the opportunity to uncover unconsidered aspects of the issue, and a focus on the participants' viewpoints and experiences with minimal biases from the researcher (Rust et al., 2017).

I conducted this study as neither a native to Idaho nor the western United States. With a constructivist worldview, I aimed to understand this issue with focus on the participants' points of view and the contexts in which they are situated. I believe grizzly bears have intrinsic value and play a vital role in the ecosystem, but I also respect rural communities and those whose livelihoods are dependent upon natural resources. While I engaged with various agency and organization staff as part of this study, this study received no funding from any agency or organization.

Data Collection

Interviews. I conducted 29 semi-structured interviews with 31 participants, both key informant residents from the communities of focus ($N = 22$) as well as agency and organization staff members ($N = 9$). I initially contacted participants via phone, email, or in person based on recommendations from staff at Y2Y and members of IGBC, their position as community leaders, or their association with the Citizens Involvement Group from the previous reintroduction plan (for which I referenced the appendix of *Journey of the Bitterroot Grizzly Bear*, by Steve Nadeau*).* I then used snowball (referral) sampling and contacted additional participants based on recommendations from prior participants. This sampling method has been used in many conservation studies and was appropriate as I was not aiming to produce results generalizable to a larger population (Rust et al., 2017). I received authorization from the University of Idaho's Institutional Review Board (Protocol 21-129) for this research and obtained verbal consent from each participant to record the interview. All interviews were recorded using an audio recording device (Sony IC Recorder, ICDUX560, Tokyo, Japan).

Interviews were conducted between June and August of 2021. Interviews were conducted either in person, over Zoom, or by phone and ranged from 16 to 110 minutes with an average length of 56 minutes.

Two different interview guides were developed depending on if the participant was a resident or agency/organization staff. The resident guide has three sections: (1) background information, highlighting social, cultural, and economic contexts, (2) tolerance towards grizzlies, including differentiating between natural recovery and reintroduction, and (3) grizzly management, including which people, agencies, and organizations are trusted (see Appendix A). The agency/organization staff guide also includes three sections: (1) background information, detailing the participant's history with the agency/organization, (2) the Endangered Species Act and ideal grizzly management, and (3) grizzly management, including challenges and public perspectives (see Appendix B). The semi-structured method allowed for flexibility throughout the interviews and provided opportunities for additional thoughts and perspectives from participants.

Focus Groups. Subsequent to the interviews, I conducted seven focus groups with 45 participants. The aim was to conduct two focus group in each community of focus (combining Kamiah and Kooskia, given their geographical proximity), but one of the focus groups in Kamiah resulted in two individual interviews and no participants showed at one of the focus groups in Grangeville. In addition, what I expected to be an individual interview in Elk City turned into a group interview, which I analyzed as a focus group based on the group's dynamics. No additional focus groups were conducted as I had reached saturation based on Tracy's (2020) definition as the point "when new information produces little or no change to emerging findings and themes" (p. 174).

Focus groups were conducted between August and September 2021 at neutral locations such as a school, a hotel conference room, and public parks. Initial focus groups were conducted after COVID-19 vaccines were widely available and COVID-19 cases in the region were low. Later focus groups were rescheduled to outdoor venues due to a regional increase in COVID-19 cases. All focus groups were conducted according to CDC guidelines at the time and masks were offered to participants. However, the pandemic may have impacted participant involvement in the focus groups. All focus groups were recorded using an audio recording device (Sony IC Recorder, ICDUX560, Tokyo, Japan) after I obtained permission to record the focus groups via signed consent form. Although the targeted range for the focus groups was 7-12 individuals, participation ranged from 3-14 participants. Participants sat facing each other at tables set up in a rectangular formation while I facilitated

all focus groups from the end of the tables. Refreshments and beverages were provided, and restrooms were available for participants. The focus groups ranged from 36 minutes to 88 minutes with an average length of 68 minutes.

The aim for the focus groups was for heterogenous participants enlisted via open community advertising. I advertised for the focus groups in three ways: (1) through articles in local newspapers (*Idaho County Free Press* and *The Clearwater Progress*), (2) by posting flyers throughout the communities, and (3) on social media via community Facebook pages. Focus group participants were asked to complete a brief survey providing demographic information. Participation was skewed towards male participants and the older age brackets. Despite recruitment for heterogenous participants, many were also affiliated with natural resource-based occupations (Table 2). Focus groups were based on a guide, which was partially informed by the topics and themes of the interview findings (see Appendix C). However, they were only semi-structured to provide flexibility and allow for differing group dynamics.

Demographic Category	**% Of participants**
Gender	
Male	65
Female	35
Age	
18-39	17.5
40-65	45
66+	37.5
Idaho native	47.5
Own land	92.5
Occupation[a]	
Outfitter/guide	20
Mining	.05
Agriculture/livestock	42.5
Timber	27.5
Natural Resources (state)	15
Natural Resources (federal)	10

Note. Only 40 of the 45 focus group participants completed the survey.
[a]Previous or current occupation.

Table 2.1 Focus group participant demographics.

Data Analysis

Interview and focus group recordings were transcribed verbatim using a speech recognition and automatic transcription service provided by Temi, which was followed by manual cleaning and editing. Two of the focus group recordings with elevated levels of background noise were transcribed verbatim manually. I used the qualitative data analysis software ATLAS.ti (v. 9.0 Windows) to conduct a thematic analysis, which is "a method for identifying, analyzing, and reporting patterns (themes) within data [which] minimally organizes and describes your data in (rich) detail" (Braun & Clarke, 2006, p. 79). More specifically, I used the more structured codebook approach to thematic analysis, with "the use of a codebook or coding frame, (some) early theme development, a (typical) conceptualization of themes as topic summaries, all associated with small q coding reliability approaches, with the Big Q values of reflexive TA," as advocated by Braun & Clarke (2021, p.5). I followed the N-C-T model of noticing, collecting, and thinking as I coded the transcripts (Friese, 2019). Interview and focus group transcripts were coded and analyzed separately because they are different methods focusing respectively on individual and collective perspectives.

I read all the interview transcripts and did a first cycle of descriptive coding ("noticing"). I used an abductive approach, with deductive coding for the concepts of tolerance and trust and inductive coding for other emerging themes ("collecting"). This follows Tracy's (2020) iterative phronetic analysis process, which involves alternating between an inductive examination of the data and a deductive application of existing theories or explanations. I then read all the coded data, wrote memos, and considered how the codes identified themes and larger concepts ("thinking"). I then conducted a second cycle of coding as a means of reorganizing and further analyzing the data that was coded in the first cycle, which was based on eight key concepts and themes that I identified within the concepts (Saldaña, 2013). The second cycle codes were used to make a codebook, which identified the concept and theme associated with each code, as well as an exemplary quote (see Appendix D). This same process was repeated for the focus group transcripts. Although the codes from the interviews influenced some of the codes for the focus groups, I did abductive coding for the focus groups as well which resulted in several new codes (see Appendix E).

Chapter 4: Interview Results and Discussion

The purpose of this study was to generate exploratory data about BE residents' opinions towards grizzlies and their management to inform management and conservation efforts for the potential natural recovery of grizzlies in the region. The research questions of this study were twofold: what are BE residents' opinions towards grizzly bears and their management, and to what extent do these create cognitive or institutional barriers or facilitators to tolerance and which people, organizations, or agencies do BE residents identify as trusted managers of grizzly bears and champions of community management preferences? Eight key concepts were identified and are described below: trust and distrust, grizzly intolerance and tolerance, management intolerance and tolerance, beliefs about grizzlies, and beliefs about the wolf reintroduction.

Distrust

Participants were asked to identify people, agencies, and organizations that they trust and do not trust for grizzly management, with distrust garnering more responses from participants. Mayer et al. (1995) define trust as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that party" (p. 712). Therefore, distrust is an unwillingness to be vulnerable and rely on the trustee. Two key components have been identified as prerequisites to trust. Despite the uncertainty and vulnerability that accompanies many natural resource and conservation situations, if agencies and organizations are perceived as trustworthy, residents may be more willing to rely on those entities (i.e., have an intention to trust; Sharp et al., 2013). Separate from trust, Mayer et al. (1995) distinguish trustworthiness as a distinct construct that describes characteristics of the trustee. In this model, the trustee's characteristics of ability, benevolence, and integrity explain a large degree of a trustee's perceived trustworthiness. After the first round of coding, I recognized that these trustworthy constructs were relevant to participants' responses about who they do not trust. Therefore, these constructs were employed during analysis to interpret participants' responses and to describe experiences where a perceived lack of these three constructs indicate the perception of an entity as untrustworthy. Other studies in the context of natural resource management support the importance of these constructs as key factors shaping perceptions of trustworthiness (Hamm, 2017; Idrissou, et al., 2013; Sharp et al., 2013). In addition, the wolf reintroduction and current wolf management were identified as themes that were associated with distrust for many participants, indicated by an unwillingness to rely on management agencies as a result of wolf management. Distrust and the

characteristics contributing to it are of importance given the ways in which distrust can impede management and conservation efforts.

Trustworthiness. Ability is the expertise, knowledge, and competency a trustor perceives the trustee to have (Mayer et al., 1995; Sharp et al., 2013). Perceived mismanagement of other natural resources (i.e., wolves, fish, ungulates, and forests) was a primary factor that contributed to participants doubting agency capabilities. For some participants, this stemmed from a perception that an entity was unknowledgeable or does not use (good) science. One resident stated, "you have to be very careful of what science you're using. Because not always are the feds interested in the best science. They're interested in the political science" (Participant I-27), while another resident referenced NGOs, sharing, "they don't have the knowledge. Their opinions can be skewed, and they just need to stay the heck out of it" (Participant I-14). Some participants connected a perceived lack of ability with inaction or indecisiveness. In some cases, this was tied to the entity's position within a cumbersome bureaucratic and/or political system, such as the participant who stated the belief that "common sense takes a back seat to the paper shuffle" (Participant I-17). Some participants more specifically shared a belief that federal agencies micromanage, inhibiting state agencies' management capabilities. Whether from previous experiences or limiting institutional factors, participants expressed concerns about agencies and organizations' abilities to manage and conserve grizzlies in a way that limits detrimental impacts for local residents.

Benevolence is whether a trustee is perceived to care about and show concern for the best interests of the trustors (Mayer et al., 1995; Sharp et al., 2013). Several participants voiced a perceived lack of benevolence from agencies and organizations whom they believe fail to understand or prioritize local interests. One resident specifically tied his concern to federal agencies, stating "they don't care. At least that's the perception out here, that the feds don't really care about us anyway" (Participant I-27). Sometimes, the lack of concern stemmed from decisions that participants feel were forced upon them, such as the wolf reintroduction which, according to one resident, "[threw] the rest of us under the bus" (Participant I-3). Such sentiments suggest participants feel a lack of compassion from agencies and organizations whom they perceive fail to keep their best interests at heart.

Integrity is whether a trustee is perceived to act within shared or agreed upon norms and values (Mayer et al., 1995; Sharp et al., 2013). Out of the three core characteristics of trustworthiness, participants most commonly expressed perceived a lack of integrity. One prominent theme that participants conveyed was a belief that agencies are driven by money,

either acting in ways that secure their funding or using their money as a means of power rather than doing what is best for either the wildlife or local citizens. For example, one resident shared:

> I think state management entities would be driven more by revenue generation because they get revenue through tag sales. And so, I don't know that a species that was not managed from the hunting perspective or the gaming perspective makes sense for a state agency to be engaged with (Participant I-8).

In the case of NGOs, participants expressed the opinion that money is misused for excessive litigation, such as the participant who said, "they go out and they recruit like-minded people, hopefully like-minded people with money, and then they go file a lawsuit" (Participant I-14). Another common theme was participant frustration at what is perceived to be an exclusive management system that ignores local voices and fails to be representative. Some participants also shared sentiments that entities lack honesty, transparency, and credibility, including one participant who said "I totally do not trust government to be honest or forthcoming with facts in these kinds of introductions" (Participant I-3), and another participant who said "quit trying to keep animals on the endangered species list forever and ever and ever and build yourself some credibility so that people will trust you" (Participant I-9). Based on their responses, participants indicated that they do not perceive agencies and organizations consistently adhere to key moral principles causing further uncertainty and pessimistic future expectations.

Responses that described perceived concerns aligning with the characteristics of ability, benevolence, and integrity were commonly expressed throughout the interviews. This indicates perceptions of untrustworthiness of entities involved in grizzly management and conservation. Some identified distrusted entities were NGOs and federal agencies (often lumped together as "the feds," although the USFWS and USFS were occasionally specified). Because of the vulnerability and uncertainty involved with grizzlies reappearing in the BE, it is important for BE residents to perceive management agencies and involved organizations as trustworthy for residents to be willing to trust these entities. The development of trusting relationships may then lead to greater acceptance of management and conservation decisions, which is especially important in the context of a large carnivore that often creates human-human conflicts.

Wolves. The reintroduction of wolves and current wolf management in Idaho were very prominent themes that emerged throughout the interviews. Several concerns relating to wolves were commonly expressed, including a belief that the wolves have been mismanaged,

a few persistent beliefs that do not align with current empirical data, their impact on other species, and their impact on the economy. Although it has been over twenty-five years since the wolf reintroduction, wolves are still a very contentious issue today and heavily influence participants' expressed trust in management agencies and conservation organizations.

Many participants expressed frustration and resentment over the wolf reintroduction and how wolves have been managed in Idaho since the reintroduction. Frustration was partly due to wolves being reintroduced despite local opposition. One resident stated, "people aren't necessarily against wolves. They're just against having them shoved down our throats" (Participant I-9). This indicates frustration with what local residents perceived as neither an equitable nor representative constitutive process, which affected the ordinary decision-making about wolves. Another aspect of participant frustration was due to how wolves have been managed over the last few decades, specifically their current population numbers in comparison to those stated as the recovery goal in the EIS. One participant expressed their frustration about the situation, sharing:

> we went ahead and we went along- yup, they're going to be reintroduced. Fish and Game will get involved. Here's the- all the people got together, decided on, was it 15 minimum breeding pairs in the state that needed to be maintained? I believe that's right. We've far exceeded that, and they go ask for delisting and what happened? All those groups said oh no, that would be to the detriment and the end of the wolf population. So, it was all bullshit from the start, you know (Participant I-12)?

While this participant largely attributed the issue to conservation organizations, many participants did not focus their blame and complained more generally about the battle and length of time it took to delist wolves from the ESA. As a result, the wolf population is now at a level which many participants consider to be out of control and past what can be managed through hunting alone. These experiences and opinions highlight how the history with wolves in Idaho is sometimes less about the wolves themselves and more about the structure of the decision-making process and the perceived mismanagement.

In a few of the cases in which residents expressed intolerance towards wolves, their attitudes were influenced by some common beliefs that don't align with current empirical data. A number of participants believe, as one resident said, "there were historically wolves that have been here, but they were timber wolves, not the Canadian gray wolves that we have" (Participant I-3). Participants characterized the introduced wolves as larger and more aggressive than the 'native' wolf, although a genetic study failed to differentiate a separate subspecies in the reintroductions (Hebblewhite et al., 2010). A few participants also

mentioned the hydatid disease that wolves carry and a concern for easy transmission to humans. Cerda and Ballweber (2018) confirmed the presence of the *Echinococcus canadensis* genotype of the disease in both wolves and ungulates in Idaho. While this is a public health concern and can cause non-material costs such as stress and anxiety, humans would need to ingest the tapeworm eggs, found in feces, making direct wolf to human transmission highly unlikely (Cerda et al., 2018). In addition, no participants expressed concern about ungulates spreading the disease. In this context, the rhetoric of the wrong species and selective blame for human health risks serves to delegitimize the wolf reintroduction, but may also serve as a foundational narrative to distrust agencies and organizations with future management and conservation efforts (Bell, 2015).

Another wolf issue that participants voiced was concern about their impact on other species, particularly elk. Although wolves certainly prey on elk calves, they are one of many factors that influence elk populations. However, for many residents, the wolf reintroduction was identified as the cause of the sharp decline in the elk herds in some game management units. In one resident's experience, in the North Fork region:

> we have seen a really good increase in elk, which is good. That's the one area where we're seeing an increase. The other areas have not come back at all since the wolf reintroduction. Unfortunately, it's just- it continues to be really poor in most of the Lochsa and Selway areas (Participant I-16).

Many participants spoke nostalgically about how they used to see elk and moose on a regular basis but that is no longer the case. In addition, this has impacted elk hunting, which, as one resident pointed out, is an important part of the local culture. These changes indicate some of the non-material costs of the wolf reintroduction, which for a few participants also included the loss of pets or horses to wolf depredation. Beyond cultural significance, elk hunting also plays an economic role and several residents commented on how with less elk there has been a decrease in tourism and, as a result, fewer outfitter and guide businesses in the region. Overall, participants shared many consequences but failed to name any perceived benefits resulting from the wolf reintroduction, reinforcing their idea that management agencies do not have the best interests of locals at heart.

The wolf reintroduction and the past several decades of wolf management have heavily impacted many residents' views on carnivores and the agencies and organizations that work to manage and conserve them. This is of particular relevance to the reappearance of grizzlies in the BE because it has created notable distrust among residents towards management and conservation entities for future efforts with carnivores. One resident stated:

> I can't imagine they won't do basically the same thing as the wolf introduction. If you use that as a model in history, those who fail to learn history are doomed to repeat it. So, if that's what they did with the wolves, why would they do any different with grizzly bears (Participant I-27)?

To many participants the wolf reintroduction process represents what they project will happen with the grizzly. Without addressing past decision-making and implementation as well as social and psychological aspects of the wolf reintroduction and management (i.e., non-material costs), distrust over the issue may persist or worsen (Madden & McQuinn, 2014). Since management agencies and conservation organizations are distrusted from experiences with wolves, residents are less likely to support future management and conservation decisions regarding grizzlies.

Trust

Participants were asked who they identify as trusted for grizzly management (i.e., who they would be willing to rely on). Since many responses focused on who is distrusted, I followed up with a question asking what participants would like to see from management agencies and conservation organizations to foster a more trusting relationship. The constructs of ability, benevolence, and integrity were once again relevant to interpreting participants' responses. Consequently, the characteristics that participants shared which align with the three constructs were a combination of traits that participants see in agencies and organizations and traits that they *would like to see* in agencies and organizations for them to be considered trustworthy. In addition, participants shared several preferences for management and conservation efforts that they would like to see to try and build more trusting relationships between residents and agencies and organizations.

Trustworthiness. Participants indicated perceptions of ability or what would indicate ability in a few ways. In some cases, this was from direct interactions with an agency or organization, such as the resident who shared "I'm on the phone pretty constantly with Fish and Game and they're really responsive and have great suggestions. And so, it's been very good" (Participant I-15). More often, it was a participant's approval of an agency's management, either in general or in reference to another specific natural resource. For example, one participant stated "[IDFG does] the best they can with the hands of cards that they've been dealt" (Participant I-14). Several participants indicated they find agencies to be trustworthy because of their professional expertise and well-educated employees. Similarly, a few participants shared either an appreciation for or a desire for the use of common sense. Of the participants that described the state as trustworthy and preferred state management,

several cited their connection to and knowledge of the local people and ecosystems as a reason, including the resident who said, “they’ll be more familiar with the region and what’s going on with the environment locally in terms of the communities and things like that” (Participant I-28). Overall, participants’ responses signified the importance of previous experiences with entities and their knowledge to the perception of an agency or organization’s ability.

Several participants expressed a desire for actions that align with the construct of benevolence, such as a desire for agencies and organizations to be concerned about residents. One participant wished agencies would “act like they care. That would be a really great start” (Participant I-27). Participants suggested that this could be demonstrated through listening and meaningful conversations with residents. Although responses about desired traits described benevolence less frequently than the other trustworthy constructs, participants’ concern over a perceived lack of benevolence as well as benevolence’s important role in other natural resource management contexts (Idrissou et al., 2013) indicate the importance of this construct to effective management.

In response to the follow up question about what characteristics participants would like to see from entities to foster trusting relationships, many participants expressed traits that align with integrity. Transparency and honesty were stated several times by participants, such as the resident who said, “open communication is the biggest thing” (Participant I-4). Inclusivity was another common theme, as one resident explained

> you can’t exclude somebody’s voice, right? It may be impossible to work with, but that’s just the reality we face in America- in general is just a lack of ability to have compromise because who is going to be God and decide that Sierra Club doesn’t get to participate and neither does the ‘kill all the grizzly bears’ group (Participant I-12).

Participants’ desire for integrity among agencies and organizations has less to do with their specific management and conservation decisions about grizzlies and wildlife and more to do with their communication with the public and the constitutive process for decision-making.

Trust-building Preferences. Many participants expressed a desire for public involvement in grizzly management and conservation, and some voiced that they see it as a necessity for successful coexistence. This coincides with how participants would like to see benevolence and integrity demonstrated through listening and inclusivity as described above. However, participants identified what they see as obstacles to a truly equitable and representative constitutive process for local residents. One obstacle is the uncompensated time required to be an active participant. One resident explained:

> it's pretty hard to have to work a full-time job, to do what I need to do…for this place to run and then go spend many hours advocating for wilderness or not wilderness or whatever I might be doing. But when that's actually your job, I'd say you got a little edge up on me to advocate and work and negotiate and work towards that end (Participant I-12).

Another obstacle, linked to the time limitation, is geographic proximity. Even when management agencies previously provided opportunities for public participation, the town halls or meetings were not reasonably accessible for all residents. For example, one resident stated that the forums need to be held "here. Not 50 miles away…when we're the ones that are going to get the major impact. And that's what so frequently happens" (Participant I-21). To participants, the public is not truly involved when opportunities to participate only occur on such an uneven playing field. Finding ways to encourage public involvement while minimizing time and/or travel requirements could make residents' voices feel more respected and valued, which could help to build trust and legitimize the decision-making process.

As previously discussed, participants would like to see open and honest communication, both about grizzly presence in the region and about the plan for management. Several participants more specifically indicated that they would like to see preemptive efforts before there is human-grizzly conflict in the BE. One resident shared "I think the awareness campaigns are going to be a really important thing to do. And being proactive about that instead of reactive would be good" (Participant I-8). When asked about the best ways for agencies and organizations to communicate with the public, participants offered a variety of responses. Several participants recommended social media, such as Facebook posts, would be an effective way to communicate with local residents. However, other residents indicated that either a lack of interest in or access to social media may be problematic for many residents and suggested that the local newspapers would be an effective channel of communication. A few participants expressed interest in meetings at local venues. Given this range in communication preferences, a multifaceted approach may be the most effective way to communicate with residents.

Participants' responses indicate that the two key components that have been identified as prerequisites to trust in scholarly literature are relevant to fostering more trusting relationships between residents and agencies and organizations. Residents must have a willingness to rely on agencies and organizations, or the intention to trust, despite the uncertainty and vulnerability that accompanies any given situation, which could be significant in the case of grizzlies reappearing in the BE. Agencies and organizations must also be

perceived as trustworthy for residents to believe they can rely on those entities and intend to trust them (Sharp et al., 2013). Differentiating between trust and trustworthiness can allow agencies and organizations to focus on the ways in which residents are either perceiving or not perceiving the core constructs of trustworthiness. Agencies and organizations can highlight their specific actions that demonstrate to residents their ability, benevolence, and integrity. For example, the state (IDFG) was a common response to the question of who participants identify as trusted and many participants expressed approval of IDFG's management of other wildlife. Therefore, the agency could emphasize their ability in that context and highlight the perceived benefits this offers residents. This could be especially advantageous in cases of unambiguous benefits (Hamm, 2017). Concurrently, the agency could focus on ways to demonstrate integrity through open communication to increase perceptions of trustworthiness.

As found by Sharp et al. (2013), "it is not only what agencies do but how they do it that influences community member perceptions of agencies' trustworthiness, which in turn influences community members' willingness to rely on managing agencies" (p. 1262). Trust-building is a complex process and certain constituents may have entrenched feelings of distrust that are not likely to change. However, efforts to increase perceptions of agency and organization trustworthiness, increase public involvement in feasible ways for residents, and increase transparency across multiple channels of communication may facilitate more trusting relationships between agencies, organizations, and residents. This may increase the acceptability of specific grizzly management and conservation decisions in the future.

Intolerance: Management

Participants' responses indicated intolerance towards both grizzlies as a species and grizzly management. A normative approach is useful for interpreting participants' responses indicating intolerance towards management. A normative belief is "one's own belief regarding what ought to be done" (Bicchieri & Xiao, 2009). Normative beliefs are largely influenced by specific situational factors and values (Zinn et al., 1998). Considering normative beliefs can help identify the expectations residents have for the structure and scope of management and determine the acceptability of management actions. Participants' responses indicate that certain management structures and actions do not align with their normative beliefs for grizzly management. The integration of social research principles, concepts, and methods, from the beginning, into scoping, engagement, data collection, and the decision-making process can help bridge the gap between the public's normative beliefs about grizzly management and the ways in which management is structured (Zinn et al., 1998).

One common theme was intolerance of outsiders dictating local wildlife management, which violates expectations of equality and creates issues of social injustice. Another frequently expressed theme was intolerance towards the restrictions that accompany grizzlies because of their current ESA listing, which would impact various aspects of life for residents. Frustrations were magnified for residents who do not think grizzlies should be listed under the ESA. When participants were asked about grizzlies' reappearance in the BE, I differentiated between reintroduction, emphasizing it was a previous proposal, and natural recovery, which is what may potentially occur now. Regardless, reintroduction was used as participant driven language, although opinions on the concept of reintroduction versus natural recovery were often different among participants.

Outsiders. Participants expressed intolerance of outsiders (i.e., anyone that does not live in the local communities) having the decision-making power for wildlife management. This intolerance occurred on multiple scales. For some participants, state level decision-makers that live in Boise or even Lewistown were considered outsiders. More commonly, the term was in reference to "the feds" that are perceived to be in Washington D.C., managing from thousands of miles away. In addition, an urban-rural divide was identified among citizens, which was perceived as problematic because of the significantly lower number of rural citizens. As one resident explained:

> the power is in the voice and the vote. And I think the more voices are heard around natural resource management from people that live in very urban environments and think the cool factor of wilderness and natural resources gives them a wholeness. I think there's a lot more political will in those places to say hey, those are our lands too. But they have no direct connection to it, but I think they have way more political power (Participant I-8).

Having significantly lower population numbers than urbanites, either for voting directly on decisions or for electing similarly like-minded representatives, prevents local residents from feeling they have any power as part of the 'general public.'

The first reason this was of concern to many participants is that these outsiders are seen as disconnected from the landscape and local knowledge and/or have different perspectives from local residents. When one resident was asked why they prefer state over federal management, they shared:

> they don't have the bloodiest, foggiest idea. And that's very typical with federal agencies. They don't have the foggiest idea what's really out there on the ground in

> any of these things. They're flying up there at 50,000 feet looking down thinking they see something. You've got to get out there and get close to it (Participant I-4).

Participants see outsiders as disconnected from the practicalities and knowledge about local wildlife, ecosystems, and ways of life, including social and economic impacts of decisions. One participant also mentioned the political "ebbs and flows" in Washington DC, indicating a concern about a lack of consistency in management- even if a favorable decision were to be made- as an additional institutional barrier.

Second, participants expressed concern about decision-making power concentrated among outsiders because local residents are the ones that have to live with the consequences of decisions. As one resident argued, "what makes you think you should have as much right to say what you say as somebody who lives in [county]?...you don't have as much to win or lose as I do. It's my backyard" (Participant I-27). Another participant echoed this sentiment, stating

> federal land management agencies are just that one or two steps too removed. They don't live here. They get a great idea, and they move forward with it, but they don't have to deal with the day-to-day changes and the consequences (Participant I-21).

Participants expressed frustration in being excluded from the decision-making process because of the inequitable distribution of consequences that burden local residents compared to both decision-makers and citizens who live elsewhere.

Participants' responses indicate their normative beliefs regarding the decision-making process are influenced by the value of equality. They believe they ought to be represented and have the expectation of a just and equitable constitutive process with a decentralized approach to decision-making. Because they feel excluded and powerless, the structure of decision-making for grizzly management violates their normative expectation of how the system ought to work. Using a normative approach to identify specific normative beliefs of BE residents may help minimize the gap between their expectations for grizzly management conservation and the current structure of the decision-making process.

The expressed concerns and frustrations can be viewed through the lens of social justice categories within the environmental justice framework. Although environmental justice has historically focused on distributive justice, which is the equitable distribution of benefits and burdens across society, a more holistic approach to justice that includes other dimensions is needed (Schlosberg, 2007). Participants' sentiments indicate a sense of participatory injustice, which involves who participates in the decision-making process, by their identification of decision-makers as outsiders. Further, recognition justice involves

acknowledging all identities, cultures, and ways of life and ensuring that decision-making structures do not prioritize or exclude certain groups (McInturff et al., 2021; Schlosberg, 2007). This has been the case in other large carnivore recoveries that have had inequitable participatory practices, creating non-material relational costs, which are negative social experiences resulting from exclusive participatory processes. Ignoring local preferences and expectations can result in feelings of marginalization, disrespect, loss of dignity, and loss of control, as well as creating perceptions of overreach by government and outside forces (McInturff et al., 2021; Thondhlana et al., 2020).

Jacobsen and Linnell (2016) found that addressing all three types of justice is important in efforts to mitigate human-wildlife conflict. They found that focusing only on distributive justice (e.g., compensation for livestock depredation) fails to address issues of recognition justice (e.g., recognizing the value of ranching as an occupation). Participants' opinions and experiences indicate they desire a recognition and valuation of their identity and way of life, which are tied to activities such as elk hunting and natural resource-based occupations; this would require addressing instances of participatory and recognition injustice in addition to any distributive injustice.

Restrictions. Although the previous reintroduction plan's preferred alternative would have considered the reintroduced grizzlies as an "experimental, non-essential" population with fewer regulations, any grizzlies part of a natural recovery that disperse into the BE have the full protection of the ESA. Given that the ESA prohibits the take (which includes killing, trapping, harming, and even harassing) of a protected species as well as the destruction or significant modification of a protected species' habitat, there are a number of restrictions that would likely result in the BE from grizzly inhabitation (16 U.S.C. § 1532, 1536 (1973)). Participants often expressed concerns about and intolerance towards these potential restrictions, which, if implemented, could impact their lives in a variety of ways.

Many participants expressed concern about the implementation of restrictions that would have economic consequences for the local communities. For example, there was intolerance toward restrictions that could prohibit timber sales by preventing logging operations in certain areas. Not only is this a source of income for some local residents, but there could be rippling repercussions that extend throughout the communities. As one resident explained, since the early twentieth century, there was a system where:

> counties and schools got 25% of gross revenues for roads and schools because it was taken off the tax rolls… but when they quit moving timber, those payments went away. And that was why the secure rural schools funding was born to substitute those

> payments. So now it's a struggle every year to get those payments reauthorized (Participant I-9).

Residents have already experienced the consequences of decreased logging operations and fear further restrictions will harm communities even more. There were also concerns for restrictions that would impact cattle grazing and that would result in decreases in hunting licenses and tourism. Participants see ESA protected grizzlies as a means for the government to intervene and further prevent activities and industries that have helped sustain local communities.

Most participants cited at least one type of outdoor recreation as a hobby. Access to public lands and the ability to recreate are important to participants, and many participants cited this as a reason that they love to live in the region. Concern was expressed that grizzlies in the BE would lead to land access restrictions. As one resident stated, "my concern is that they would try to eliminate some of the recreation. You have no idea how much fighting I have to do to keep this stuff open and try and get some rational decisions made" (Participant I-27). There was specific concern tied to the activity of black bear hunting, as some participants are concerned management agencies will prohibit bear baiting with grizzlies on the landscape, eliminating a hobby for some and a source of income for others. For a few participants, there was concern that even the presence of a single grizzly could result in land access, and therefore recreational, restrictions. This indicates confusion and/or uncertainty about what restrictions might be implemented (e.g., if a particular timber sale would be prohibited) and at what point on the spectrum of natural recovery (i.e., approximately how many grizzly sightings before restrictions would be implemented).

Intolerance was expressed towards the restrictions that prohibit the take of grizzlies, especially because residents cannot protect their private property without potentially facing legal repercussions. As one resident shared:

> if I'm in grizzly country and you have a hunting season, nothing has special protections, when I lose an animal to a grizzly it's just the way- the way we live. You deal with it. But if I lose my horse and the government has told me I can't shoot that grizzly, I can't haze that grizzly, he has special protection, more important than you or your horse, you're not going to like that grizzly and the federal government (Participant I-14).

Several other participants expressed similar concerns about being unable to defend their livestock. Participants are intolerant to management that appears to prioritize grizzlies over local residents' property, which in many cases is directly tied to their livelihood. There were expressed concerns that grizzlies will also indirectly interfere with other natural resources by

inhibiting the ability to effectively manage them. One resident expressed concern, citing an issue:

> that's problematic about grizzlies being in Idaho is that some environmental groups will try to stop active management, whether it's livestock grazing, timber management, etc. They will use the grizzly as a legal lever to try and stop things that they don't like (Participant I- 18).

The ESA restrictions that accompany grizzlies both directly and indirectly represent a threat to personal property and natural resources which some residents are dependent upon for their livelihood. Because there are often limited alternate economic prospects in non-recreation rural counties such as Idaho and Clearwater Counties, this loss of control due to restrictions may create a sense of vulnerability among residents who perceive threats to their livelihood (Dickman, 2010; Lawson, 2019). In addition to these material costs, residents may also experience non-material costs tied to restrictions. Since many people take pride in natural resource-based occupations, restrictions can also represent threats to their cultural identity (Thondhlana et al., 2020). Recognizing this vulnerability and working to developing coping mechanisms may decrease the expressed intolerance towards grizzly management.

Several residents expressed intolerance specifically towards management and one participant explicitly identified grizzlies in the BE as a management problem, stating "the biggest concern is the baggage that would come with a bear, not the bear" (Participant I-12). There is concern that the ESA will be misused, leading to unnecessary restrictions. It also seems there is a lack of understanding among participants as to how the threats of this 'baggage' could present, including how many grizzlies would need to be present before restrictions would be implemented and exactly which restrictions would be imposed. This was indicated by the participant that shared "does everything else that has to do with humans have to stop because a grizzly bear walked through there? That's what I'm concerned about" (Participant I-9). This appears to be an issue that extends beyond the context of the BE as Hughes et al. (2020) also described concerns about a lack of clarity in policy and terminology related to grizzly management in Alberta, Canada. Situational specifics, such as the number of grizzlies present and the extent of the regulations, influence participants' normative beliefs about grizzly management. Perceived risks are often based on subjective assessments and can be exacerbated when risks are imposed and uncontrollable and intuitive risk (i.e., lay judgements) "tends to be driven largely by the outrage that is felt over the potential consequences" (Bruskotter & Wilson, 2014, p. 160). Therefore, this lack of clarity about potential future restrictions could amplify residents perceived and intuitive risk assessments.

While agencies are unable to change the ESA and accompanying restrictions, it may be beneficial for agencies to communicate what their plan and response would be to future grizzlies in the BE. Decreasing the uncertainty of the situation, when possible, may prevent residents from exacerbating perceived and intuitive risks. Addressing misunderstandings about what regulations might be imposed and at what point on the natural recovery spectrum can provide situational specifics so that residents can modify their expectations of both grizzly management and what are considered to be acceptable costs. This can also allow residents to figure out ways to mitigate losses and strategize adaptation methods (Thondhlana et al., 2020). These adjustments may help to minimize the gap between residents' normative beliefs and management actions and increase tolerance towards grizzly management.

Need for ESA Protections. To assess support for grizzly conservation on a broad scope, participants were asked whether they think grizzlies should be protected under the ESA and there was a wide range of responses. Some participants were supportive of their listing, including the resident that shared "I'm very supportive of things to protect the animals" (Participant I-26) and the resident that said, "they should be. I mean, they got wiped out practically" (Participant I-15). Some participants weren't opposed to grizzlies being listed under the ESA, but think the policy is misused (i.e., overzealous application of the previously discussed restrictions). For instance, one resident cited misuse "because there's people who basically, they make a living on keeping litigation alive and keeping things listed forever" (Participant I-9). Another resident stated, "as long as they're willing to take them off when the time comes, I don't have a problem with that," citing another common misuse concern of the refusal to delist a species upon reaching recovery goals (Participant I-21). Others were opposed to grizzlies being listed altogether, such as the participant who said:

> why would they be on the Endangered Species list when they're rampant through Canada and Alaska? Just because they're not- they weren't heavily populated here is no reason to put them on the Endangered Species list. You know, they're not in Tijuana either (Participant I-14).

This opinion is reflective of sentiments of distributive injustice, questioning why BE residents should bear the burdens of grizzly presence when they are not globally endangered and there are healthy populations in less human-dominated ecosystems. It seems that for some participants the anthropogenic uses of the BE outweigh the fact that the ecosystem offers a roadless expanse of suitable habitat for grizzlies, especially when there are healthy grizzly populations elsewhere. Although some participants are supportive of ESA protections for grizzlies, the frustration over restrictions and associated burdens is compounded for those

who do not think grizzlies should be listed. The belief that grizzlies should not be listed under the ESA also may be heightened by the previously discussed issues of mistrust, as was found by Hughes et al. (2020).

Natural Recovery Versus Reintroduction. Participants were asked if they were familiar with the grizzly reintroduction plan from the 1990s and there was a mix of participants who were and were not familiar. Participants were also asked if they are concerned about a current plan for reintroduction. This is of concern for several participants, including one who stated "I don't want them physically picking them up and putting them in my backyard. No, I don't- that does concern me and yeah, I could see it happening" (Participant I-16). I differentiated between reintroduction and natural recovery and emphasized that reintroduction is not a current plan. Despite these efforts, reintroduction was still often used as participant driven language.

Participants were also asked their opinions on reintroduction versus natural recovery. A few participants expressed support for a reintroduction of grizzlies in the BE. There were mixed opinions about whether reintroduction would be the necessary route to establish a population in the BE versus whether grizzlies would be able to naturally repopulate the region on their own. More often, participants expressed opposition to the concept of reintroduction. As one participant communicated:

> it's counterproductive in a lot of ways…If all of a sudden, I am forced to confront something I never had to before- and a bunch of it- I'm probably going to resent it. But if I had to gradually get used to you and your ways, I might find that you had some redeeming values, but if all of a sudden, I got 40 of you to put up with, I might not like you (Participant I-19).

To several residents, a reintroduction would mean a sudden appearance of a significant population of grizzlies which would result in numerous human-grizzly conflicts.

Participants generally expressed more tolerance towards the idea of natural recovery of grizzlies in the BE. One resident stated, "I think that natural movement, if we have suitable habitat and populations move, then I think that's appropriate" (Participant I-8). Several residents were not supportive of natural recovery but expressed a resigned tolerance because it feels like something out of their control. One resident that said "I don't know that I'm going to have any choice. You know, I'm just going to have to be one of the many here that learns how to handle themselves" (Participant I-21). This aligns with an interpretation of tolerance by Glikman et al. (2021) where "being tolerant might not mean that a person prefers to assent to a specific situation; people might tolerate a situation just because they have no other option"

(p. 3). Natural recovery is seen as preferrable because it's viewed as a natural ecological course as opposed to the human intervention and imposition associated with reintroduction, but it may simply be the more palatable of two unwanted options.

Both confusion about what is happening with grizzly management in the BE and suspicion about what will happen are prevalent among participants. This confusion or lack of clarity may be contributing to intolerance towards grizzly management. While natural recovery may not be widely supported, participants' responses indicate that it is often more tolerable than a reintroduction. Therefore, it may be beneficial for agencies and organizations to emphasize that there is no current or future reintroduction plan for the BE and that there is only a potential natural recovery occurring in the region. Because of issues with distrust among participants towards management and conservation entities, there may still be some residents that remain suspicious. However, for some residents, a clear and consistent message about natural recovery may prevent conflicts with residents' normative beliefs and mitigate some intolerance towards grizzly management. As in the case of the uncertainty and confusion surrounding potential future restrictions and regulations in the BE, a lack of clarity and communication may result in exacerbated perceived risks and increased intolerance. An erroneous belief about reintroduction could also unnecessarily lead to a perceived violation of normative beliefs among BE residents.

Tolerance: Management

Participants were asked what actions could be taken that would make them feel more comfortable with grizzly management. Many responses correlated with the previously discussed trustworthiness constructs and trust building preferences and were related to *how* agencies manage. Additional responses expressed preferences for what participants would like to see agencies *do.* Responses centered around two management actions: allowing hunting and education. Considering tolerance as a normative belief is again useful for interpreting residents' responses because it identifies residents' expectations of what management ought to do. If managers recognize what actions are expected or acceptable, they can try and modify management plans to meet those expectations, or at least minimize the gap between expectations and actual management (Zinn et al., 1998).

Several participants expressed that grizzly presence in the BE would be more tolerable if people were allowed to hunt them. It was often recognized that we currently do not have an established population with a need for hunting, rather this type of management would be desirable in the future under the assumption that a sizable population reinhabits the BE. There

were concerns that without hunting there would be no way to keep a BE grizzly population at a controlled, manageable level, expressed by the resident who shared:

> I think that positive science backed harvest at some point of grizzly bears is going to be essential just to keep them in check. Cause I don't know what else kills a grizzly bear besides a person or each other. So, I feel like that is the only option really to effectively manage them. Cause I think they're going to be difficult to deal with and if we don't have the ability to manage them- kind of like wolves- it took so long to be able to manage wolves and they were so devastating in that time to elk herds, in particular. If they go unchecked without management, I just don't think it's something our elk herds can take anymore (Participant I-16).

Once again, the wolf reintroduction and management were reference points for participants who feared the grizzly population would similarly become too high in the BE and cause various issues in the ecosystem and the local communities. Allowing the hunting of at least some grizzlies would give residents a greater sense of control over the situation and would make their management in the BE more tolerable. However, given the political and legal complexities of delisting grizzlies from the ESA, meeting residents' expectations and avoiding conflicts with normative beliefs about hunting grizzlies may be challenging to impossible. Rather, efforts could be focused on alleviating the fear generated by wolves by communicating the differences between the two species that make an uncontrollable grizzly population unlikely, such as grizzlies' slow reproductive rate (USFWS, 2022).

Many participants expressed the need for further public education about grizzlies. One resident said:

> so, my point is there needs to be education. I mean widespread, continual posters, newspapers, whatever, to tell people if there's going to be bears or deer or anything else around. They need to know how not to lure them and what the dangers are (Participant I-11).

A common concern was a need for education tied to safety. Participants expressed concern for attractants both at people's homes and while people are recreating, citing examples of seeing people camping in the region with open food and garbage containers. These fears are exacerbated by the growing population in Idaho and the belief that the newcomers will be particularly unknowledgeable about living and recreating on a landscape with grizzlies. For example, one participant shared a concern about people trying to approach bear cubs to take a video. There was also an expressed desire for hunter education, including identifying grizzlies versus black bears, or as one resident said, "you need to teach man to be careful

when they're in grizzly country. Be careful. That doesn't mean you can shoot every goddamn thing" (Participant I-19). It was specified that the responsibility of education should not fall on outfitters and guides, who do take responsibility for educating their clients, but do not have the resources for general public education. Rather, the opinion was expressed that the efforts should come from agencies that are supported by public taxes. While participants expressed the opinion that they don't think seeing one or two grizzlies in the region requires a complete overhaul of management or recreational facilities, they also said they would like to see proactive education campaigns before there are any human-grizzly conflicts. Similar to previously discussed communication preferences about grizzly presence in the region, participants indicated that a multifaceted approach to education across a variety of modalities and channels would be the most effective.

Between the two commonly shared preferences for management actions, clearly allowing hunting is the less feasible option given the politics and bureaucratic structure behind the legislation preventing it. Since an established grizzly population in the BE is likely decades in the future, as we are just potentially seeing the beginnings of a natural recovery, it seems more practical for management agencies and conservation agencies to focus their efforts on education. This is supported by the essential role education has played in the recovery progress seen in the NCDE, GYE, SE, and CYE grizzly populations (USFWS, 2022). Many participants identified education from agencies as an expected management action. Efforts such as more proactive education concentrated in BE communities, especially if there are continued verified sightings in the region, as well as expanding the channels through which educational outreach is provided may help agencies meet residents' normative beliefs and increase tolerance towards management.

Intolerance: Grizzlies

As previously discussed, tolerance can be assessed in many ways. While considering tolerance as a normative belief is useful for interpreting participants' responses expressing tolerance and intolerance towards grizzly management, considering tolerance as an attitude is useful for interpreting participants' responses expressing tolerance and intolerance towards grizzlies. An attitude is "a predisposition to respond in a generally favorable or unfavorable manner with respect to…[an] object" (Fishbein & Ajzen, 1972, p. 488). As stated by the TPB, attitudes are one of the key predictors of behavioral intentions. Attitudes have been used to assess tolerance in several human dimensions of wildlife studies (Bruskotter et al., 2015; Kansky et al., 2014; Treves et al., 2013), as favorable or unfavorable attitudes impact to tolerance- the willingness "to [accept] wildlife and/or wildlife behaviors that one dislikes"

(Brenner & Covelli Metcalf, 2020, p.262). Participants expressed unfavorable attitudes that indicate intolerance towards grizzlies for several reasons, including safety concerns, economic concerns, and concerns for other species. Intolerance was exacerbated for participants who do not see a need for grizzlies in the BE.

Negative Attitudes. The most commonly expressed negative attitude towards grizzlies was because of the threat that they present to human safety. One resident expressed safety concerns, sharing "you know, they eat people. They will eat you. I don't think they go and hunt for people, but if there's conflict- I mean populations of people are incompatible with grizzly bears" (Participant I-9). Some participants used other large carnivores on the landscape, such as wolves and black bears, as a reference point to assess how grizzlies present more of a threat to human safety because they are more aggressive and unpredictable than other carnivores. For example, one resident said:

> I've never been around grizzlies, but from everything that I've heard, they're a lot more aggressive than our basic black bears that you yell at, and they scamper off in a heartbeat. They're big teddy bears versus the grizzlies that'll be more threatening. And then it's how do you deal with that- that kind of threat (Participant I-17)?

Negative attitudes associated with risk perception can be impacted by a person's social influences, which appears to be the case for this resident who based his risk perception of grizzlies on information that he has heard rather than experienced (Slovic, 1987). In addition, Slovic (1987) found that risk perception is highly influenced by two factors: (1) "dread risk," which emerges from threats that are perceived to be uncontrollable, can have fatal consequences, and involve an inequitable distribution of the risk, and (2) "unknown risk," which can emerge from new threats. These factors are relevant to a large carnivore reappearing on a landscape from which it has been extirpated for several generations. Accurate risk perception is important in wildlife management (Nyhus, 2016). To mitigate biased risk perception and negative attitudes among residents, it may be useful for agencies to share and highlight instances of grizzlies in the region that did *not* cause any human-grizzly conflicts.

Communicating when and (vaguely) where grizzlies are present if they continue to enter the BE would also be useful information for participants who expressed concerns about recreating in areas with grizzlies. As previously mentioned, outdoor recreation- in a variety of forms- is a cherished benefit of living in the region for most participants. One resident shared that the presence of grizzlies would impact her decision to recreate, stating "if I knew there

was a lot of grizzly bears in the area, I probably wouldn't go hiking there" (Participant I-7). Among those who are willing to recreate in grizzly territory, one participant said:

> I've spent a fair amount of time over the years in grizzly country and you definitely have to comport yourself and your camp site and everything differently when you're in grizzly country. So that's going to be a huge change for people in Idaho. And I don't know how people will react to that, whether they would be accepting of that or not (Participant I-18).

Grizzlies represent not only a threat to human safety, but a threat to residents' lifestyles and the ways in which they recreate.

Grizzly bear attacks are rare worldwide and fatal attacks are extremely rare. Between 2000-2015, there were 62 attacks in the conterminous US (all of which took place within Wyoming, Montana, and Idaho) and 7 fatalities (Bombieri et al., 2019). However, even if attacks are classified as rare, they are a very real and warranted threat. Even if residents do not experience an attack, the threat of one can cause non-material social costs, including fear and anxiety, which can become an environmental justice issue due to the unequal distribution of these costs. Further, these costs are often overlooked in wildlife management, with a focus on the visible material costs. However, overlooking non-material costs can serve as a barrier to tolerance and prevent management efforts that attempt to mitigate these costs (Thondhlana et al., 2020). Identifying and understanding non-material costs of grizzlies reappearing in the BE will be essential to human-grizzly coexistence. Non-material costs are often not quantifiable and can be difficult to identify. Therefore, meaningful engagement with local residents may be necessary, which could be established through a more inclusive participatory process and a decentralized decision-making process. The participatory process is important for contentious issues such as grizzly conservation because research has found benefits of participation to include better informed and more feasible outcomes which may better address non-material costs, more flexible decisions, and higher levels of acceptance of decisions (de Vente et al., 2016).

Another reason participants expressed negative attitudes towards grizzlies was out of concern for the impact they will have on other species, namely elk. One resident shared:

> if there was more of a fish run to support them and our elk herds were in better shape to take them on then I wouldn't see as much of an issue with it, but I feel like we already have an elk herd that's kind of been stepped on and I don't see a positive right now (Participant I-16).

Participants expressed that they believe there are already enough other predators on the landscape, as was previously discussed as a concern with wolf management. The concern for other species is tied to another reason participants expressed negative attitudes for grizzlies- economic concerns. Several participants were concerned about residents who work in the outfitting and guide industry, who could suffer from a decline in business if grizzly bears are a source of additive mortality for huntable species. In addition, there was concern about ranchers, such as the participant who stated:

> I know there's concerns with livestock and the people that bring cattle up there for the summer and so forth. And that would certainly impact them because the cattle that they bring up in the summer are on the menu, that's a fact (Participant I-4).

Participants expressed concern about the vulnerability of their or their neighbor's livelihood due to private property losses, such as livestock, or declining natural resources, such as wildlife, both of which are perceived to be threatened by grizzlies.

Participants are concerned about some of the material costs that could result from grizzlies re-inhabiting the BE. Some material costs could be mitigated for residents, such as establishing a compensation program for ranchers who lose livestock to grizzlies. However, other material costs present a more complex problem, such as decreases in tourism and outfitting businesses due to declines in the elk herds. Predation is a concern for elk populations in several of the game management zones in Idaho, so additional management considerations would need to be made if grizzlies caused further additive mortality (IDFG, 2014). Negative attitudes towards grizzlies among participants are complex and reflective of concerns for both non-material and material costs. If grizzlies do continue to reappear in the BE, it would be beneficial for management agencies and conservation organizations to take both non-material and material costs of their presence into account to address issues of intolerance more comprehensively.

Need for Presence in the BE. Several participants questioned the need for grizzlies to re-inhabit the BE. One resident said:

> it gets back to recognizing where things currently exist versus- again, there's reasons why they don't exist in other areas…again- the Yellowstone Ecosystem- and there's areas where those critters are and I believe in protecting them, but we shouldn't reintroduce them to New York City (Participant I-17).

Given their populations in Canada, Alaska, the GYE, and the NCDE, participants expressed the opinion that it seems unnecessary to also have grizzlies in the BE. The BE is perceived to be an increasingly developed and human dominated landscape and the reappearance of

grizzlies would only introduce human-grizzly conflicts and interfere with human interests. Even if management agencies and conservation organizations effectively communicate when grizzlies are in the BE, there is also a need to communicate why they *should* be in the BE. As one resident questioned:

> why should we have them out there? Should we have them out there because they used to be there? Should we have them out there because the more species we have the better balanced our region may become? But what we have to do is build a story that is acceptable (Participant I-6).

Public support is essential in large carnivore conservation and management. There will always be costs for residents who share a landscape with grizzlies, despite the best efforts of management agencies and conservation organizations. However, without a coherent narrative that provides a reason as to why people should accept those costs, they will likely remain intolerant to doing so.

Tolerance: Grizzlies

Participants were asked what they think about grizzly bears. In addition to the previously discussed negative attitudes, some positive attitudes were also expressed, indicating that attitudes are also useful for interpreting participants' responses that suggest tolerance towards grizzlies. Participants also expressed some tolerance towards grizzlies in the form of passivity, rather than appreciation. In some cases, there was a philosophical and moral reasoning behind participants' tolerance as they used the 'right to exist' defense. There were also more nuanced opinions expressed through "not in my backyard" (NIMBY) sentiments where participants indicated tolerance towards grizzlies elsewhere, but intolerance towards grizzlies in the BE.

Positive and Passive Attitudes. Participants expressed positive attitudes towards grizzlies for a variety of reasons. They used a number of positive general descriptive terms, including "beautiful," "magnificent," and "awesome." Participants also expressed respect for grizzlies' intelligence and acknowledged their status as a "definite symbol of wilderness" (Participant I-8). One resident said, "I want to think they're part of the original ecosystem. And when you start eliminating what's been here for hundreds of thousands of years, you're probably upsetting something," recognizing grizzlies' role in their ecosystem (Participant I-19). Overall, the reasons for the positive attitudes expressed by participants align with the reasons found in other scientific studies about attitudes towards grizzlies, despite the unique context of grizzlies in the BE (i.e., a relatively recent extirpation and the recent reintroduction of another large carnivore). Grizzlies' key role in an ecosystem and their symbolism of wilderness

may be perceived benefits that agencies and organizations could highlight, as an increase in perceived benefits has been found to increase tolerance.

Other participants expressed some tolerance towards grizzlies through passivity. One resident stated, “you just kind of have to coexist somewhat” (Participant I-28), and another resident said, “I don’t see how you can expect to live in the area and not have respect for what the hell is here” (Participant I-19). While neither resident voiced support for grizzlies re-inhabiting the BE, they did indicate tolerance, perhaps because they see no other option. The ‘just deal with it’ mentality is not a useful strategy of promotion for agencies and organizations that are trying to establish perceptions of acting with benevolence. However, knowing that some local residents do have this attitude may provide a common starting place for discussions in some cases.

Right to Exist and NIMBY Sentiments. There are philosophical debates about whether the right to exist applies to individuals or entire species (von Essen & Allen, 2020). While such debates are beyond the scope of this study, it is interesting to note that participants spoke of grizzlies on both an individual and species level. When discussing grizzlies in the BE over the past several decades, participants seemed to consider them on an individual level. Although there have only been verified sightings in the BE since 2007, several participants think there has been a much longer presence of grizzlies in the region, including the participant who said, “I think we’ve had a few grizzly bears forever” (Participant I-6). In reference to the recent verified sightings, one resident stated, “more recently were the best confirmations and one of them was up by Powell. And I don’t know if that’s the same one that made it towards Elk City, but, you know, that’s fine” (Participant I-12). Although a couple of participants expressed skepticism towards the recent sightings, more commonly participants accepted the recent sightings, and in a few cases believed in the historical presence of a few grizzlies. When considered on the individual level of just a few bears in the BE, participants’ responses indicated some level of tolerance towards their presence.

Despite the previously discussed intolerance towards grizzlies, when discussing grizzlies in a future context, including their potential presence in the BE, many participants used varying language to indicate a belief in their right to exist on a species level. A couple of participants applied their right to exist directly to their presence in the BE. For example, one resident stated, “they belong there. It’s their place first, you know? So, I mean, why shouldn’t they be there?” (Participant I-15), and another resident said, “I think we did ourselves a disservice by wiping all of them out the way they did historically” (Participant I-4). Other participants indicated a belief in their right to exist as a species more globally. For instance,

one resident said, “I don’t want them to die out, that’s for darn sure” (Participant I-26) and another resident shared “I don’t believe in exterminating things by any means” (Participant I-29). However, conversations with participants revealed that, in many cases, the right to exist concept was used inconsistently and was in fact more nuanced.

Upon elaboration, many participants clarified that grizzlies have a right to exist- just elsewhere. NIMBY sentiments were expressed with varying levels of specificity. Some participants expressed tolerance towards grizzlies anywhere other than their immediate vicinity, such as the resident who said, “I like grizzlies. As long as they’re not at my house” (Participant I-7). Others were more specific and only expressed tolerance towards grizzlies in the regions where they already reside, such as the resident who said, “I wish they’d stay in Yellowstone. To me, it’s another threat to our existence and my backyard” (Participant I-17). As was found by von Essen and Allen (2020), these responses imply that grizzlies’ “right to exist is essentially contingent upon location” (p. 105). This contingency allows participants to align their beliefs with the social norm of supporting wildlife conservation, while simultaneously excluding their personal participation and any costs they might incur. Given the impossibility of containing a wide-ranging carnivore such as a grizzly to selected regions, the location contingency allows participants to support grizzlies in theory, but not in reality.

Although participants voiced a belief in grizzlies’ right to exist, that belief was often complicated by accompanying NIMBY sentiments. However, neither of these beliefs should be entirely written off. As von Essen and Allen (2020) suggest, both of these beliefs have merits worth addressing. NIMBY sentiments may be indicative of participants’ sense of environmental injustice. Participants may view grizzlies in their ‘backyard’ as distributive injustice because of the unequal costs for rural compared to urban residents. There may be a sense of recognition injustice, as many participants indicated that they think the general public and rural residents in particular are excluded from the decision-making process. This would require addressing participatory injustice by inviting residents to become involved in the decision-making process and offering more accessible opportunities for inclusion. Participants’ belief in grizzlies’ right to exist, although nuanced, could be useful as a point of common ground from which managers and residents could start discussions. Beginning future discussions from a point of agreement rather than conflict may lead to less contentious and more productive discussions.

Chapter 5: Focus Group Results and Discussion

As the focus group guide was informed by interview results, the eight key concepts that emerged from the interviews- trust and distrust, grizzly intolerance and tolerance, management intolerance and tolerance, beliefs about grizzlies, and beliefs about the wolf reintroduction- were similarly identified. Within these concepts, many of the same themes from the interviews emerged in the focus groups, although in some cases their salience varied. In addition, several new themes were also identified. These coincided with the eight key concepts discussed below but indicate slightly different perspectives and collective views.

Distrust

Groups were asked which people, agencies, and organizations they trust and do not trust for grizzly management, assessing their willingness to be vulnerable and rely on various trustees. They shared more responses about who they do not trust. Similar to the interview data, the trustworthy constructs of ability, benevolence, and integrity were useful to interpret responses (Mayer et al., 1995). Groups often perceived a lack of these constructs among management agencies and conservation organizations, indicating issues of distrust.

As is often the case with wildlife management, there were underlying issues of human-human conflict. One way this was expressed in group discussions was in the form of conflicting knowledge spheres, with competition between scientific and local knowledge. Local knowledge can be defined as “the full variety of insights, observations, and beliefs related to a particular decision that do not stem from conventional scientific expertise,” leading to knowledge that is generally based on experience and context specific (Failing et al., 2007, p. 48). Scholarly literature documents a history of tension between the use of scientific and local knowledge in wildlife management, where many affected publics feel that local knowledge is disregarded and disrespected (Lute & Gore, 2014; Sjölander-Lindqvist et al., 2020; Skogen & Krange, 2003). This may occur because managers do not trust local knowledge and/or they have a challenging time understanding and incorporating undocumented knowledge properly (Berkes, 2009). This conflict between knowledge spheres indicated another source of distrust among groups. In addition, the wolf reintroduction and current wolf management in Idaho also notably influenced groups’ level of trust in agencies and organizations and decreased many participants’ willingness to rely on management agencies and conservation organizations for future grizzly management.

Trustworthiness. Ability was often assessed by using the management of other natural resources as a reference point. One participant evaluated IDFG’s ability by stating:

> our elk herds, our moose herds, our deer herds are way down. Idaho Fish and Game- the only reason they exist their charter says is to manage the herds. So, they can't manage the elk, they can't manage the moose, they can't manage the deer, they can't manage the fish- no more salmon. It seems like they can't manage anything (FG-2).

Similar statements were shared across the groups based on participants' assessment of the management of various natural resources. In some cases, mismanagement was perceived as a lack of active management. Other opinions questioned the knowledge and decision-making of entities, such as the participant who said, "these biologists have these ideas and, you know, don't sit down and think them through thoroughly" (FG-3). Such opinions doubting management capabilities indicate a lack of trust in those agencies for conducting future management efforts.

Several groups described a perceived lack of benevolence, stating bluntly that agencies and organizations do not care. The perceived lack of care was directed at different subjects, including specific demographics (e.g., sportsmen), local residents, and natural resources. One participant shared, "that's the only time you see action, is if a cougar goes into Pullman or something. Yeah, they're right there and they get it. But if they're in my backyard, they don't give a damn" (FG-7). The phrase "they don't care" was voiced by several groups, which indicates a perceived lack of benevolence through a lack of empathy for the concerns of western BE residents. Such consensus among groups reinforces the perception of untrustworthiness since management and conservation entities are not perceived as capable of keeping residents' best interests at heart.

Groups generated the most consensus about characteristics that align with a perceived lack of integrity. Common concerns were a perceived lack of transparency, honesty, and credibility. One participant described this concern stating, "my big problem is there's no transparency with the federal Fish and Game or the Idaho Fish and Game. Nobody tells you how many bears exactly are coming this way. When are they coming? What's going on?" (FG-2). The opinion was also expressed that agencies and organizations are driven by money, which was tied to funding sources for agencies and excessive litigation for organizations. As one resident said, "they're looking for the almighty dollar and could give a shit" (FG-5). According to groups, this leads to biased agendas rather than neutral, objective decision-making. Another common concern described what is perceived to be an exclusive participatory process, including one participant's opinion that "we don't have a say. I mean, we might say something, but they already got their mind made up. We've seen that happen here with the wolves and I think it's going to happen with the grizzlies" (FG-5). In this instance,

a participant described voicing an opinion that was then ignored, indicating frustration at agencies' disingenuous efforts to include public voices. Other focus groups discussed being entirely excluded from the decision-making process and not having an opportunity to voice an opinion. Generally, there was consensus on the exclusive nature of the decision-making process. From this perspective, agencies and organizations fail to act in accord with values such as honesty and inclusivity, thereby operating with a lack of integrity.

The opinions and descriptions expressed in groups support the relevance of the three constructs of trustworthiness presented in the Mayer et al. (1995) model of trust. Participants' opinions and experiences describe perceptions of insufficient ability, benevolence, and integrity among management agencies and conservation organizations in some situations. "The feds" and NGOs were commonly identified as distrusted entities, although several participants included IDFG in this category as well. These perceptions of untrustworthiness impact participants' intention to trust, as they indicated a hesitancy or unwillingness to rely on these entities for future grizzly management and conservation efforts.

Local Knowledge. In several focus groups, participants expressed frustration about people and managers who are not present on the local landscape to acquire local knowledge and doubt or disregard local knowledge from residents. When talking about grizzlies reappearing in the BE, one resident said:

> don't say 'well they're not here.' Even though we know they're here, we've proven they're here. And then they turn around and tell us no, we don't know what we're talking about. But we do, you know? And that's what they said with the wolf, that you don't know what you're talking about (FG-3).

In other groups, participants shared similar experiences where their local knowledge about the presence of wolves or grizzlies was questioned or denied. For instance, one participant mentioned an experience talking to federal biologists at a hunting check station, sharing:

> I say what's going on with these moose herds? Why are we not seeing any moose? We used to see 6 or 7 a day. Well, the gal says they just moved out of the area that you're hunting in. And I'm sitting there thinking to myself, you know we hunt this whole area, and we see moose every year for the last 25 years in here and now all of a sudden there's absolutely no moose. Don't tell me that they've moved out. Now can I trust someone that I know is lying to me at that time? No way (FG-2).

In this case, the participant has local knowledge generated from long-term observations and hunting experiences, which they feel is rejected by biologists in favor of scientific knowledge. Both parties seemed to question the validity of the other's knowledge, which can lead to the

dismissal of local knowledge as subjective, imprecise, and value-laden and the implication that scientific knowledge is objective and accurate (Failing et al., 2007). This can create issues of recognition injustice where one way of knowing is clearly prioritized over another in the decision-making structure (McInturff et al., 2021).

This prioritization of valuing scientific knowledge over local knowledge can have several repercussions for managers. Studies have found that residents lose trust in managers and the decision-making process when local knowledge is ignored, which the data in this study supports (Lute & Gore, 2014; Sjölander-Lindqvist et al., 2008). Ignoring or dismissing local knowledge can encourage individuals in demographics that hold local knowledge in high esteem (e.g., hunters) to coalesce as an attempt to preserve their knowledge system, culture, and values (Sjölander-Lindqvist et al., 2008). This could lead to an 'us versus them' mentality. In addition, excluding local knowledge can diminish the quality of decisions, especially since local knowledge holders may be more adept at identifying social and cultural repercussions of management decisions that might otherwise be overlooked (Failing et al., 2007). As one participant said about hunters, outfitters, and trappers, "we're better conservationists because we want a renewable resource" (FG-2). This supports other data that indicates a sense of recognition injustice, where hunters and farmers want to be respected and valued as sustainable and responsible land managers (Salvatori et al., 2021).

One of the benefits of involving local knowledge holders in co-management efforts is the inclusion of multiple scales of knowledge in the decision-making process (Berkes, 2009). Local knowledge holders may have greater insights into local conditions, especially in remote areas, whereas state managers may have greater insight into a regional or ecosystem perspective. Further, it will be more difficult to identify possible points of agreement or common values between distinct groups if a sphere of knowledge is excluded (Sjölander-Lindqvist et al, 2020). Establishing a sufficient participatory process to enable the incorporation of local knowledge and merging scientific and local knowledge can be challenging. However, the benefits of such efforts for future grizzly management and conservation could facilitate increased trust among affected publics, higher quality decisions, and more contextually appropriate policy.

Wolves. According to participants, the reintroduction of wolves and current wolf management in Idaho are reasons for distrust of management agencies and conservation organizations. Opinions that indicated distrust resulting from wolf management were in relation to perceptions of mismanagement, a few beliefs about wolves that do not align with current empirical data, and wolves' impact on other species and the economy. Groups tied

these opinions to grizzly management and conservation by expressing the opinion that entities' efforts and the consequent results would be no different between the two large carnivore species.

Opinions of wolf mismanagement were largely reflected in two ways: (1) that a wolf reintroduction was forced on residents and (2) that wolves were not delisted upon reaching the recovery goal in the EIS and the population was allowed to continue expanding. One participant shared their thoughts on the reintroduction, stating "I think the Fish and Game from the state, they didn't want them, but they were pushed down our throat without anybody having any say" (FG-3). Similar opinions placed blame for the wolf imposition on 'the feds.' Other groups expressed similar sentiments but did not specifically attribute blame, stating, "they were just dumped on us" (FG-7) and "they're going to cram it down our throat, like they did with the wolves" (FG-5). Beyond the reintroduction, participants expressed negative opinions about wolf management due to the state's current population numbers. One resident said:

> they wanted to be able to get what Idaho's proposing now: 150 wolves and 10 breeding pairs or whatever their number is. Okay. They had that within the first two years. They won't admit it, but they had- they were there. Now we're somewhere in the neighborhood of 3,000 (FG-3).

Although some of the details in this statement do not align with IDFG's data, the complaint about there being far more wolves than the recovery goal in the EIS is reflective of the current situation. There were approximately 1,556 wolves in Idaho as of 2020 compared to the 150 wolves listed as the recovery goal (Phillips, 2021; USFWS, 1994). As one participant stated, "it just relates right back to the question of trust. They didn't do what they said they were going to do" (FG-1). To many participants, the wolf reintroduction and current wolf management are examples of the exclusion of local voices from the decision-making process and dishonesty from management agencies and conservation organizations. Because of the salience of these negative experiences, groups indicated it will be hard to trust these entities for future grizzly management and conservation efforts.

A few persistent beliefs about wolves that do not align with current empirical data were expressed, which influenced opinions on the wolf reintroduction. Several groups voiced concern about the different subspecies of wolf that was reintroduced, including the participant who said, "we actually had some native wolves left here in Idaho. That's, I'm sure, not the case any longer because, again, they didn't stand a prayer against their cousin from Canada who is so much bigger" (FG-3). The terms "Canadian wolf" and "Canadian gray" were used in several groups; this terminology was used to denote a larger, bolder wolf than the 'native'

wolf, despite the lack of genetic evidence indicating a different subspecies (Hebblewhite et al., 2010). There was also concern about hydatid disease, which many wolves in Idaho do indeed carry, but misconceptions about the ease with which it can be transmitted to humans (Cerda & Ballweber, 2018). One participant expressed concern because:

> we go out here and ATV on these trails and how many of you have gone out and seen wolf scat in the middle of the road? All the time. Well, that dries, goes into the dust, you breathe it, you can catch it from that. So, we're all at risk because of the wolves. All the wildlife here is at risk because of the wolves (FG-2)

However, there is no scientific evidence of airborne transmission; humans need to ingest the tapeworm, making wolf to human transmission very unlikely (Cerda et al., 2018). Further, there were beliefs that do not align with current empirical data about the rate at which wolves need to be harvested to control their populations. One resident shared, "see science says with the wolf that we need to get rid of 60-75% of the total population per year to have any meaningful control" (FG-5). Yet, statistical models in a meta-analysis by Creel and Rotella (2010) provided estimates that "coincide well with the simple observation that [Northern Rocky Mountain] wolf populations have declined three times in the past decade, in each case with human harvests of 23-24%" (p. 5). This indicates that participants perceive wolf populations to be much more difficult to control with harvesting than recent data suggests. These perceptions exaggerate the risks that wolves present and the manageability of their populations to delegitimize the wolf reintroduction; this may provide a narrative for which to distrust agencies and organizations.

In every focus group, participants expressed concern about wolves' impact on other species, largely elk and moose. One participant shared:

> I don't remember ever thinking that we wouldn't have elk, like when we were kids, or even 25, 30 years ago. It seemed like the wolves were put here- the Canadian wolves were put here- and they promised us that they'd keep the number in the state between 100-150. I thought, well there's a couple thousand cougars they say, so what's a hundred wolves mixed in with that? But then when it was so badly mismanaged, and they lied to us about maintaining those numbers and it got up into the thousands, then, that's when everything turned south and collapsed. Our elk and moose started disappearing and changing their habits so much (FG-1).

Groups discussed how they no longer see these ungulates on the landscape like they used to and how that affects their hunting opportunities, including the locations in which they can hunt, reflecting non-material costs of the wolf reintroduction on an important recreational and

cultural activity. However, there were also concerns about how the ungulate predations have been reflected as material costs with consequences for certain industries and local economies. One resident said:

> I look at it from a business standpoint of, you know, this was the premiere elk hunting area in the United States at one time before the wolves were introduced. So now we've lost our moose, our elk herds have dwindled to minimals, the deer have dwindled to minimals, and we worry about our livestock and personal animals and our persons, ourselves, with wolves so it's hard not to take that same issue with the grizzly (FG-2).

There was general consensus about the concerns for those in the guide and outfitting industry due to decreased elk hunting opportunities. The concern also extended beyond those industries to the decrease in tourism, which has impacted local hotels, restaurants, and businesses. In several other instances, the material costs of cattle depredation for ranchers were discussed. After witnessing a variety of cultural and economic consequences from the wolf reintroduction, participants' responses indicated a perceived lack of benevolence in response from the agencies that they feel forced the wolves upon them.

The BE's history with the wolf reintroduction and current wolf management creates a unique context for the potential natural recovery of grizzlies. One participant shared:

> everybody here and anybody who cares…knows what happened with the wolves. And even though we're not talking about wolves, the same thing will happen with grizzlies. It just will. Their promise- they will promise one thing and then they will take 15 years to do something else (FG-4).

Several groups echoed this sentiment with opinions such as "why would the government lie about wolves and not about grizzly bears" (FG-2)? Consensus among western BE residents coalesces around the belief that future grizzly management will mirror what they experienced with the wolves, as this is a salient reference point. As a result, communities of the western BE express less tolerance for another large carnivore reappearing on the landscape, stemming from the distrust of management and prior wolf reintroduction experiences.

Trust

Focus group participants were asked who they trust and do not trust for grizzly management. In some cases, trusted entities were identified, whereas in other instances participants expressed what they would like to see from distrusted entities to foster a more trusting relationship. Once again, the constructs of ability, benevolence, and integrity were useful for interpreting the discussions and identifying perceptions of trustworthiness. Group

discussions also indicated some trust-building and communication preferences for future grizzly management and conservation efforts, including staff members that are accessible to the general public and a clearly defined and communicated management plan.

Trustworthiness. Discussions that indicated a perception of ability stemmed from the management of other wildlife in several cases, although this was not a general point of consensus. In such instances, participants referenced IDFG's management of black bears and wolves, including the participant who shared:

> the state has done well with the wolf population or wolf management. We may not agree with what the number is or what number should be there, but they have been able to manage that and keep a viable population and it's expanded to other states (FG-6).

The state's ability is highlighted in this case, despite differences in opinion towards preferred management outcomes. When I asked one group about their thoughts on grizzlies' current ESA listing, one participant said, "I'm assuming somebody knows more than I do, and they need to be listed…my trust is just in the fact that somebody knows" (FG-1). This indicates a willingness to trust based on the perception that agencies have the knowledge and capability to make good decisions. Generally, there was a desire for active management and informed decisions, indicating the importance of the perception of ability among agencies and organizations.

In a few groups, participants expressed a desire for caring and empathetic management agencies and conservation organizations. One participant voiced, "to make people feel like they're concerned with their safety would go a long ways" (FG-1). Another expressed was for entities that "actually listen" rather than disingenuously seek public opinion. Participants suggested this could be achieved through meaningful conversations. Such sentiments indicate the importance of perceived benevolence among entities, who make residents feel their opinions and experiences are understood and respected.

Among the desirable traits that groups said they would like to see from management agencies and conservation organizations, the two most prominently discussed were transparency and honesty, which align with the concept of integrity. One participant expressed a desire for:

> transparency. No lies. A hundred percent when…the people pushing this agenda think or know that something may be happening or their thought is to do something down the road, a hundred percent would gain trust is transparency of what is going on.

> Versus somebody finding out a year down the road something was shoved in under the table and signed without anybody knowing (FG-4).

These terms were echoed across groups, indicating agreement about their importance. Another desire was for an inclusive participatory process where residents feel they have a voice. One resident stated, “give the public a say. I don’t feel like we’ve had a say in any of it” (FG-7). Such sentiments reflect the value of principles such as open, honest communication and equality, indicating the importance of the perception of integrity in communication and decision-making efforts.

Trust-Building Preferences. Groups indicated what communities would like to see from agencies and organizations to foster more trusting relationships between entities and the public. One preference was for a more inclusive decentralized decision-making process that values public voices, which aligns with the expressed desires for benevolence and integrity as described above. One way in which participants feel this could be achieved is through agencies and personnel that are perceived as accessible and connected to the local communities. One resident stated:

> it’s too bad they don’t fund…the Fish and Game so that they could come out here and you could go talk to that- you know, over my time here, I’ve seen Fish and Game. You could go talk to them and they would relay things on to Boise, you know? And I’ve had people call from Boise and say ‘hey, I hear you’” (FG-3).

A couple of other groups reflected similar sentiments, such as the participant who expressed appreciation for “somebody that’s involved in the community, and you can see out and about” (FG-1). Such opinions indicate a desire for agency and conservation staff that are available and spend time interacting with local residents. This supports the findings in Sharp et al. (2013) where participants describe trust as a two-way relationship built on mutual respect rather than a one-way relationship where agencies just provide a service. Prioritizing community interactions and accessibility could help agencies and organizations increase residents’ intentions to trust for future grizzly management and conservation efforts.

Another expressed preference is for a proactive and defined management plan which would ideally be both established and communicated to residents before there are numerous grizzlies on the landscape. In one group, a participant shared:

> I guess what I’m saying is I’d like to see a policy for that. We have transient bears wandering through. What really- where do we stand on it? I don’t know what that’d be. I’m just saying, I just think that’d be something really important to establish- that guidelines, when people say ‘hey, we get bears wandering through, what really do we

> do? Do we shut down roads? Do we shut down people? Do we move the bear out? I mean, that's what I'd like to see because I think that'd be important (FG-6).

This opinion was voiced in other groups as well. Without a clear management plan, residents base the perceived risks of grizzlies in the BE solely on their subjective assessments, wherein there is a higher potential for affected publics to exacerbate the perceived risks and catastrophize a situation. Other opinions indicated as such; groups expressed concern about a slippery slope scenario with grizzlies. One discussion reflected concern for a slippery slope from natural recovery to reintroduction, where a participant stated:

> so, if we allow that one bear to come in here, and then two and three and four and five, if we allow it and don't stand up and speak what we- our feelings are and what we thought is impacting us, the next thing you know they will- it gives them an excuse to introduce. It's going to give them the excuse that oh, now we can bring over 50 pairs and there's nothing these people can do about it (FG-2).

For other groups, the slippery slope concern was about restrictions, where enacting a few restrictions "opens the door to that expansion [of recovery zones] and that exclusion of opportunities" (FG-6). Because of the distrust participants have for management agencies and conservation organizations, uncertainty about future management and conservation efforts enables them to assume that what may start as unwelcome but tolerable scenario would progress into a worst-case scenario. Proactive interactions between agencies and residents where agencies communicate a future grizzly management plan could help assuage residents' slippery slope concerns, increase the perceived benevolence of agencies, and foster a more trusting relationship.

When asked what the most effective ways for agencies and organizations to communicate with the public would be, discussions typically indicated preferences for a variety of channels. Meetings in local communities was a common response, and the importance of communicating with specific demographics, namely hunters, anglers, and sportsmen, was another. In addition, groups also mentioned communicating via social media, especially to reach younger generations. In another case, the local paper was suggested as a useful communication channel. This range of responses indicates that a multifaceted approach may be the most effective way to reach residents across various demographics.

Groups indicated that the ways agencies and organizations work is of importance in addition to the actual outcomes. This data supports the relevance of the two identified prerequisites to trust- intention to trust and trustworthiness- to developing more trusting relationships. When asked who they identified as trusted for grizzly management, groups

mentioned IDFG and representatives from demographics directly tied to wildlife, such as hunters, trappers, and guides. Differentiating trustworthiness from trust and identifying residents' perceptions of ability, benevolence, and integrity can be useful for agencies and organizations as it can enable them to highlight instances where these constructs are perceived and address areas in which they are perceived to be lacking. For instance, IDFG could highlight their perceived ability by focusing on successful management with other species. In turn, agencies may need to address perceptions of a lack of integrity stemming from an exclusive participatory process, indicated by participants' desire for hunters, trappers, and guides to be involved with management. This also suggests the importance of including local knowledge possessed by these demographics in management and conservation efforts, which may help address issues of recognition injustice and decrease human-human conflicts. Groups also voiced trust for individuals that work for an agency rather than the agency. In these instances, participants referenced individuals that they had direct interactions with, once again indicating the importance of accessibility and establishing community relations as this can provide motivation for residents to have an intention to trust. Another mechanism for building trust, as indicated by Hamm (2017), is highlighting the benefits an agency provides. Communicating a more clearly defined plan for future grizzly management and conservation efforts may enable residents to identify specific benefits (e.g., safety benefits from knowing about the presence of grizzlies and the handling of problem bears). Although trust is a complex concept and may be impossible to establish with certain residents and groups, more comprehensive efforts to address both issues of trustworthiness and intentions to trust may help agencies and organizations build more trusting relationships with the public.

Intolerance: Management

Group discussions revealed intolerance to both grizzly management and grizzlies. Considering the normative beliefs that were expressed during discussions can allow agencies and organizations to identify gaps between how management and conservation are currently structured and executed and residents' expectations. One prominent disparity between expectations and reality was the perception that outsiders have the decision-making power, with group opinions indicating intolerance towards what is perceived to be a politically biased constitutive process that excludes local opinions and knowledge. Similar to the interviews, participants expressed concerns that can be interpreted through an environmental justice framework, focusing on social injustices. Participants also expressed intolerance towards the potential restrictions that could be imposed since grizzlies would be accompanied by ESA protections. The frustration over potential future restrictions was more pronounced for

participants who do not see a need for grizzlies to be listed under the ESA and protected. Confusion and suspicion about the possibility of a future reintroduction exacerbated this intolerance, in some cases, as groups commonly expressed that reintroduction violates their normative beliefs (i.e., beliefs on how grizzly management and conservation ought to be done).

Outsiders. Consensus in and among groups indicated a belief that outsiders have the power in the decision-making process. The term outsider applies both to decision-makers (often 'the feds') or NGO staff who live elsewhere, and to urban residents with voting power. Groups felt that they have no influence on federal decision-makers in particular, such as the participant who stated:

> if we don't like somebody in Idaho, it's a five-hour drive. We'd be down there pounding on his desk. We can't do that to the head of the Fish and Game Service. Sometimes, you don't even know who it is (FG-3).

Groups also expressed how urban residents have the numbers to outvote rural residents and therefore have the power over decision-makers, such as the participant that said:

> I think one of the biggest concerns is what's happening in Oregon and Washington where you have that I-5 corridor that dictates what happens in the whole state. And we're getting a bunch of buildup in the Boise valley and it's going to dictate what happens here (FG-4).

Participants identify an urban-rural divide, even among other Idahoans that do not live in their local community. In some cases, participant's opinions indicated that outsiders have the decision-making power because of a politically and bureaucratically driven constitutive process, which dictates who is included and excluded in the decision-making process and which institutional actors have authority. One resident shared:

> it's no different than politics. What's only going to happen is what everybody higher or in more power wants to happen. It's not what actually is what makes this area better and what people see- it will be agenda driven through and through (FG-4).

This sentiment was echoed in another group by a participant who said, "it's back to politics. It's whoever is sitting in the governor's office- and he doesn't even have that much power" (FG-2). Group consensus strongly indicates that western BE residents feel like they have no power or voice. A constitutive process perceived to be arranged around political and bureaucratic structures enables the violations of participants' expectations for a representative process; it is perceived that politicians' decisions will be swayed by outside forces, not by a small handful of rural residents. Consequently, groups indicated a belief that future grizzly

management and conservation efforts will be executed regardless of how local BE residents feel or what they do.

Residents of the western BE perceive this structure of decision-making, with outsiders possessing the power, to be problematic for two reasons. First, they are the ones that have to live with the consequences of grizzlies reappearing on the landscape. One participant shared, “we have to deal with it. You get to sit up at your desk and go it would be so cool to have grizzly bears back in the area, but we- we’re where the rubber meets the road” (FG-2), and another participant stated, “obviously the locals, we have to live with it” (FG-7), indicating consensus among groups. In reference to grizzlies’ ESA listing and protections, one participant shared how “a lot of the pressure to do that comes from people who don’t live in this area, have no interaction with grizzlies, aren’t concerned with them other than the fact what they read and see on Facebook or something” (FG-5). Discussions indicated frustration among group participants who feel they will be simultaneously powerless and inequitably burdened with consequences.

Another reason that groups expressed frustration with outsiders having the decision-making power was because outsiders are perceived to have a different perspective than local residents. In one focus group, a participant stated that outsiders “don’t understand the communities, they don’t understand the people” (FG-6), which was met with consensus from other participants. This opinion was shared in another group by a participant who stated, “life is much different out here in our eyes” (FG-4). Often, groups expressed that outsiders’ different perspective stems from them being disconnected from the local environment. Sometimes, this referred to people who do not live in the region, such as the participant who stated his preference for state management, rather than management from “Washington D.C., which is mandated by 435 people who have no clue what the Selway Bitterroot looks like” (FG-6). It also referred to local managers perceived to be disconnected from the environment by seclusion in their office, including the participant who said, “the only time I see them out there is if they’re wanting to write somebody a ticket because their ATV is over 50 inches” (FG-2). Participants indicated intolerance of management by outsiders or those disconnected from the local environment because such individuals do not understand local residents’ needs and preferences and therefore cannot manage fairly.

The social injustice categories within the environmental justice framework are useful for identifying and interpreting the gaps between the current management structure and community expectations, and normative beliefs therein. Group discussions suggested an expectation that a participatory process ought to be representative and unbiased. There are

perceived gaps between these expectations and the current structure of management due to the political and bureaucratic structure of the constitutive process which dictates who has authority and who is included and excluded from decision-making. Intolerance towards the perception that outsiders have the decision-making power implies a sense of participatory injustice through an exclusive decision-making process. With federal management in particular, rural residents feel they have no political power because they are outnumbered in votes by urban residents who have a different perspective about grizzlies and wildlife. These urban residents also do not have to deal with the burdens of sharing a landscape with grizzlies, tying in a sense of distributive injustice. Participants' responses also indicated a sense of recognition injustice, such as the participant who said "[those supporting grizzlies in the BE are] taking away livelihoods of people that built this community…and not appreciating my lifestyle. They're not appreciating what I built" (FG-4). Residents in natural resource-based occupations whose livelihood would be affected by grizzlies in the BE may feel disregarded and disrespected if they feel their way of life is not recognized and valued. The three social justice categories of participatory, distributive, and recognition injustice are often intertwined, and not comprehensively addressing all three issues can create non-material relational costs, such as negative social experiences, and harms, such as a negative self-image (Jacobsen & Linnell, 2016; Thondhlana et al., 2020). A decentralized decision-making process incorporating more participatory approaches, while certainly challenging to achieve, has the potential to increase tolerance towards future management and conservation efforts.

Restrictions. Complete consensus was observed among groups in their expressed concerns about the restrictions that would accompany grizzlies, most acutely as they are currently listed under the ESA. The most commonly voiced concern was about the potential economic impacts from regulations. One participant explained how grizzlies in the BE are:

> a bigger problem because they're an endangered species. You're going to see limitations on grazing. You're going to see restrictions on timber harvest, restrictions on recreation. It's happening up in northern Idaho now, in the far north. So why wouldn't it happen here (FG-7)?

From another group discussion, a participant said, "the economics and everything else in this area, or any area where they don't belong, is going to be affected in a very negative way" (FG-4). This sentiment was echoed across groups, with emphasis on concerns for the timber, mining, ranching, and outfitting industries. Idaho has a long history of economic ties to natural resources. Although currently less than 3% of employment in Idaho is in agriculture, forestry, fishing, hunting, and mining, the state's history has contributed to a culture of rugged

individualism where these industries are a key component of a collective Idahoan identity (Idaho Department of Labor, 2021c; Putsche et al., 2017). Regulations that would restrict these industries represent both a financial and cultural threat to residents and rural communities.

It was clear from discussions that many participants spend time recreating on the land and value the ability to do so. Therefore, another common cause of concern was about regulations that could restrict land access. As one participant said, “they’re just going to limit man’s ability to go out and do what you would like to do… when you can’t because the road’s closed because we might disturb something” (FG-3). Concerns were also raised about limitations on hunting other species because of grizzlies, which is an economic issue as well as a recreational issue for some participants. One participant said:

> if we start having grizzlies show up in the area, what’s the first thing they’re going to do? They’re going to shut down hound hunting, they’re going to shut down [black bear] baiting. And then they’re going to make you go to class. They’re going to make you go to class if you get a black bear tag to prove you can tell the difference between a grizzly and a black bear…and [Washington residents] have to go to this class which costs them every single year (FG-2).

Groups expressed intolerance to potentially either losing a source of recreation or income or having to invest additional resources and time into the activity because of the presence of grizzlies. In addition to recreation and hunting concerns, access limitations can become a moral argument. Some perspectives on human rights include the right to access public lands among their moral claims (Lee et al., 2021). Findings support this assumption, including the participant who shared, “it’s public land. This is our land. This land belongs to the people” (FG-2). This indicates that not only were participants intolerant to access restrictions because of limitations on recreation and hunting, these restrictions were also seen as an infringement on their rights.

The inability to protect themselves and their property without facing legal repercussions contributed to western BE residents’ intolerance toward restrictions. Although the ESA does include an exemption for penalties if there is evidence that a person was acting to defend either themselves or another person, groups indicated that this clause is either not widely known or they believe it would be misused and they would still be charged with a penalty (16 U.S.C. § 1540 (1973)). For example, in one group a participant shared how people they know in northern Idaho are:

> fearful of walking around in the mountainous areas without a firearm with them at all times. Of course, if they shoot then they're in big trouble. You heard what happened to…a few years ago. I mean, the feds came in and they tried to arrest him for protecting his family. And not only that, they were going to fine him a hundred thousand dollars (FG-7).

Such sentiments indicate that some residents believe grizzlies are given more rights than humans, which can result in resentful attitudes towards those imposing such restrictions. In other cases, intolerance was expressed for the inability to protect one's private property, namely livestock. One resident stated, "if they're eating my cows, I want to be able to get rid of them" (FG-3). This sentiment was reflected in several groups, where participants expressed frustration at their position of vulnerability in being unable to protect their private property, which may be tied to their livelihood.

Participants' concerns about restrictions reflect their expectations about how grizzlies ought to be managed. Participants believe that grizzlies ought to be managed in a way that does not hinder local residents' economic interests nor impede on their ability to recreate, hunt, or otherwise access public lands. Participants also believe that people ought to have the right to defend their private property in addition to themselves and others. Efforts to communicate management plans and restrictions may facilitate shifts in expectations and associated normative beliefs. As previously shown by responses in this study, a lack of clarity and uncertainty can lead some participants to amplify intuitive risks about the legal repercussions. There will likely always be some opposition to any restrictions, but clear communication may mitigate unnecessary intolerance to management from unlikely restrictions that residents project will happen.

Need for Protections. As a way to assess attitudes towards grizzly conservation on a broad scale, groups were asked to share their thoughts about grizzlies being listed under the ESA. Although their listing was supported in a few instances, the common response was that they should not be listed. In many cases, groups cited grizzlies' healthy populations elsewhere as a reason they should not be listed. One resident stated "I think they have plenty in Montana. We don't need them here. I think there's plenty in northern Idaho. I know there's plenty in British Columbia and Alaska" (FG-3). A few participants used the term 'recovered,' including the participant who said, "I think most definitely that grizzlies are recovered in the intended recovery areas" (FG-4). Such language implies that even if grizzlies at one point should have been listed under the ESA, this is no longer the case at present. In some groups, the frustration over grizzlies' ESA protections incited the 'shoot, shovel, and shut up'

terminology, including the participant who said, “but they’re an endangered species. You can’t do anything other than shoot, shovel, and shut up” (FG-4). Such sentiments indicate that participants feel ESA protections for grizzlies are government overreach which leaves rural residents with no other option than to manage the situation themselves.

In several groups, discussions revealed anthropocentric values that clash with grizzlies’ ESA listing and protections. One resident expressed such a sentiment and said “when they put endangered species ahead of man, that is a concern. That is not only a concern; that is wrong” (FG-3). In reference to the BE specifically, some identified the region as increasingly human dominated and no longer see it as an appropriate habitat for grizzlies given the current level of human inhabitation and development. One participant stated:

> the animals may have been here in this region, but this region has dramatically changed…there are people living out in the hills. The whole community has changed. Everything has changed and that needs to be really considered in the application of the Endangered Species Act, especially when they start to say well this is- we’re trying to allow them to reoccupy their original territory. Well, their original territory has been dramatically modified (FG-6).

Such sentiments indicate that individuals with anthropocentric values will likely prioritize human use and development of the BE over considerations and protections of non-human species. Attempting to change a person’s values will likely be an unsuccessful venture. Rather, agencies and organizations could highlight examples from north Idaho, Montana, and the GYE that demonstrate that coexistence between humans and grizzlies is possible. As one participant said of such regions, “people have learned to live with it. Not that they like it” (FG-1). These regions can serve as models to show that while sharing a landscape with grizzlies may not be preferable, it is possible to manage grizzlies among humans living and recreating on the land.

Natural Recovery Versus Reintroduction. Efforts were made to differentiate natural recovery from reintroduction in every focus group, as well as to clarify that there is only a potential natural recovery occuring; there is no current plan for a reintroduction. However, reintroduction was still commonly used as participant driven language. For example, groups occasionally indicated suspicion about a current reintroduction, including the participant who shared “you hear people say ‘well, I think that they’re putting them here and just not telling us.’ I’ve heard that a few times” (FG-1). This confusion may be causing unnecessary intolerance towards management in some cases, as several discussions revealed differing opinions toward reintroduction versus natural recovery.

In some cases, participants did not care about how grizzlies might reappear in the BE, such as the participant who stated, “I don’t feel any differently than if they were to be reintroduced. I had the same thoughts of natural recovery versus reintroduction” (FG-7), subsequently indicating intolerance towards grizzlies rather than grizzly management. However, more commonly, management’s role in grizzlies’ reappearance in the BE was of significance. In such cases, natural recovery, even if not approved of, was preferable to reintroduction. One participant shared:

> I have no problem with natural recovery because that’s going to depend on food sources and things like that. As long as they’re not preying on humans and their garbage and all of that, they’re out and they’re able to sustain, that’s fine (FG-6).

As similar opinions were expressed in other groups, it seems natural recovery is preferrable as it would be slow and limited by an ecological carrying capacity rather than imposed and potentially unmanageable, such as the wolves. Or, as one participant said, natural recovery would “let nature take it’s course” (FG-5). This supports the findings by von Essen and Allen (2020) where hunters used the claim of unnaturalness to delegitimize the practice of reintroducing wolves. With this perspective, management that intervenes and reintroduces wildlife is inauthentic and unnatural, whereas management that simply supports ‘nature’s course’ is more legitimate and tolerable.

Efforts to clarify that there is no reintroduction plan will be futile for both residents who are intolerant to grizzlies in the BE regardless of how they arrived and residents with an intractable distrust of management. However, since discussions more commonly revealed preference for natural recovery rather than reintroduction, clarifying the current situation may mitigate some intolerance towards management. Group discussions indicated that, for many, there is a normative belief that if grizzlies are in the BE, it ought to occur via natural recovery. Highlighting that we are only potentially seeing a natural recovery may increase residents’ perceived legitimacy and acceptance of management and conservation efforts.

Tolerance: Management

Focus groups were asked what actions would make them feel more comfortable with grizzly management. Beyond the previously discussed constructs of trustworthiness and trust-building preferences, group discussions revealed expectations about what residents think management ought to do. Groups identified two actions that would require delisting grizzlies from the ESA: (1) allowing hunting and (2) fully transitioning management to local authorities. While these may not be feasible short-term objectives, identifying some of the reasons why participants have these opinions can help agencies and organizations address some

institutional barriers to tolerance and assuage some concerns. Although educational outreach was mentioned as a management preference, this topic was less salient in focus groups than interviews.

Across groups, discussions indicated a desire to be able to hunt grizzlies, based on various lines of reasoning. One participant said he thinks people should be able to hunt grizzlies once we "get their numbers to where we feel like it's sustainable, you know? Not to where they're eating every elk that we have and every moose that we have like the wolves have done" (FG-1). Another resident voiced a similar opinion stating, "if Fish and Game would open up season on grizzlies, that would be a natural way to slow the progression of their reintroduction" (FG-3). Participants' reasons for wanting a hunting season seems to be influenced by the wolf reintroduction and driven by the fear of another unmanageable carnivore on the landscape. Using the wolf population as a reference point, participants expressed concern that a grizzly population in the BE would similarly grow to an unacceptable size and cause problems for the ecosystem and local communities. In addition, the one participant's use of the term reintroduction indicates confusion and/or suspicion about future management approaches, fearing an 'unnatural' reintroduction that would quickly overwhelm the ecosystem. A concern for safety was another expressed reason behind the desire to hunt. As one participant said, "it'd make me feel more comfortable if I need to, I could shoot one. Not that I want to, but I dang sure will if it's me or him" (FG-7). In this case, the fear was about being powerless against a threat to personal safety. There was also a concern for the threat grizzlies pose to private property, such as livestock. One participant said, "so if a grizzly is eating a bunch of cows, can I shoot it? That'd be my management" (FG-6). There is a fear about being unable to protect one's economic assets and a threat to one's livelihood.

Delisting is not a current goal at this stage of initial transient grizzlies in the BE. However, management efforts could target and attempt to mitigate some of residents' fears that contribute to their desire to be able to hunt grizzlies or defend themselves. Once again, efforts to communicate what is currently taking place (i.e., a potential natural recovery) may be beneficial, as this could deter concerns about a sudden unmanageable influx of grizzlies via reintroduction. Educational outreach could also address the fear of an exponential grizzly population increase like what was seen with the wolves, which is unlikely based on grizzlies' slow reproductive rate (USFWS, 2022). Safety concerns are a valid fear and represent a non-material cost for residents. Promoting the self-defense clause of the ESA may not be ideal out of fear of an overzealous application of it. However, efforts to make residents feel as though their safety is of the greatest concern may be beneficial. Addressing the material costs of

grizzlies in the BE, such as livestock depredation, through compensation programs may also be perceived as a benevolent approach in lieu of delisting.

Beyond allowing grizzly take, group discussions indicated a preference for the state to have jurisdiction for grizzly management. As previously discussed, participants expressed intolerance to outsiders with a different perspective having the decision-making power. Participants perceived state management to give local residents more of a voice. For example, one participant said:

> honestly, I prefer state management just because we have a little bit more control there as the people. We elect the legislators to go to Boise that can pass legislation, that kind of impact Fish and Game. That's why I favor state control (FG-7).

However, transitioning management authority to the state is also a major political and legislative challenge. Yet, the underlying concern behind the preference for state management is that local residents don't have a voice. In two groups, participants discussed the potential merits of a collaborative, which could provide an opportunity for those that feel excluded to have a say. One participant said:

> I think a collaborative group could have some serious clout and management capabilities. It would be bringing together the federal agencies, it would be bringing together the state, it would be bringing together local public entities and that collaborative group would have the ability to hopefully manage those species, whether it be bear or anything else, without the threat of litigation (FG-6).

Participants indicated that tolerance for such efforts would depend on who was invited to participate in the collaborative. As one participant said, "it's got to be people that are in the business though," referring to hunters and outfitters (FG-2). Someone else pointed out the importance of including interest groups. Equitable representation was seen as essential by participants so that they "know that the information is not going to get skewed" (FG-2). Such responses indicated a normative belief in an inclusive and representative decision-making process. Clark and Vernon (2017) found that marginalizing or excluding people or groups from the decision-making process can result in the perception that decisions and policies are forced upon them, which may be a more salient concern for BE residents who expressed they felt the wolves were imposed upon them. Although transitioning management authority may be an impractical objective at this time, efforts to establish a more just constitutive process could help address some of the social conflict contributing to intolerance towards management.

Group discussions indicated key institutional barriers to tolerance towards grizzly management. Ultimately, the actions that participants identified that would make them more

comfortable with management- allowing hunting and local authority- may be difficult to impossible to achieve, especially in the near future. However, agencies and organizations could aim to address these institutional barriers by addressing some of the expressed cognitive barriers to tolerance towards management, including identified fears. Participants expressed concerns that wolf management would become the status quo for grizzly management, so agencies and organizations could highlight biological differences and management intentions that minimize the likelihood of this. Another identified institutional barrier is a constitutive process that conflicts with participants' expectations and normative beliefs about the structure and inclusivity of the decision-making process. A collaborative inviting the range of affected publics is one method that may help address this barrier to increase tolerance towards management.

Intolerance: Grizzlies

Groups were asked how they feel about grizzlies and considering tolerance as an attitude is useful for interpreting the discussions, similar to interview data. Attitude- the tendency to assess something favorably or unfavorably- has been widely used to assess tolerance towards wildlife (Bruskotter et al., 2015; Fishbein & Ajzen; 1972 Kansky et al., 2014; Treves et al., 2013). Group discussions revealed negative attitudes towards grizzlies, largely based on safety concerns and infringements on residents' ability to use the land freely, concern for other species, and economic concerns. These attitudes indicated an intolerance towards grizzlies, which was compounded for participants who do not see a need for grizzly expansion into the BE.

Negative Attitudes. The primary negative attitude towards grizzlies manifested as an assessment that they pose a threat to human safety. As one resident said, "the thing about it- the grizzlies- is it's not like wolves. They're going to kill the game, but you get in the way of a grizzly, you're going to be their lunch. And there's no joking around about that" (FG-5). Grizzlies cause fear, i.e., intrinsic dread (Dickman, 2010), because of the threat they present to physical safety, which is comparatively more threatening than the other predators on the landscape that serve as residents' reference points. Participants also described personal interactions, or, more commonly, media stories about human-grizzly interactions elsewhere to demonstrate the threat grizzlies pose to humans. For example, one participant cited "an article [where] a hunter in Alaska was attacked and mauled by a mama and two cubs" (FG-4). Media coverage of large carnivores often include graphic details, which can lead to a cognitive illusion where people overestimate the frequency of rare events with high memorability (Bombieri et al., 2018; Kahneman & Tversky, 1996). Such media coverage may

present a challenge to future management and conservation efforts as it has been found that media coverage of large carnivores can exacerbate people's perceived risk, which can decrease tolerance (Gore & Knuth, 2009). While grizzlies do present a valid threat to human safety which should be addressed, residents' risk perception may be heightened by factors such as intrinsic dread and novelty, due to grizzlies' reappearance in the BE after a period of extirpation (Dickman, 2010; Inskip et al., 2016). Management efforts to communicate an accurate risk assessment may mitigate intolerance towards grizzlies (Nyhus, 2016).

In some cases, this threat to safety was seen as a violation of one's rights to move about the landscape without fear. For instance, one participant referenced people that live near the GYE population of grizzlies and said, "they go out to the outhouse, they got to go with a gun. They go to feed their cattle, they got to go out there with a gun. That's not being free" (FG-2). Groups expressed that the threat to safety also infringes on their and their children's willingness and ability to recreate and enjoy the landscape as they like. As one participant pointed out, "we pick berries up in…area. Like, man, I don't think I want to take my grandkids up there, you know, if you start seeing a few grizzlies in the area" (FG-7). Another participant shared a similar opinion and said:

> so I go 30 miles out of town, you know, and if I have to worry about getting yarded out of my tent in the middle of the night I don't want to have to have a pistol laying next to me, or a rifle, just to protect myself because if they're hungry, they're going to do whatever it takes to get a meal whether it's my horse or myself or my grandkid (FG-3).

Although grizzly attacks are rare, they do present an additional threat for residents that work and recreate on the landscape with them- a threat that is not equally distributed among all citizens (Bombieri et al., 2019). Non-material costs (or opportunity costs), such as fear and anxiety, should also not be overlooked, as is often the case with wildlife management, as these costs can serve as a cognitive barrier to tolerance (Thondhlana et al., 2020).

Another negative attitude reflected across groups was the impact that grizzlies would have on other species in the region, namely elk and moose. One participant stated:

> see what Idaho was, as far as I'm concerned, or concerned about, is it turning into a predator pit with the black bear and the cougar and the wolf. Now they're trying to promote grizzly bears. I don't have any time for it. I'd rather see the hills got a bunch of elk and deer in them. Of course, we got a bunch of white tails around here but, like I said, I remember the days that I could go out and kill or see 30-40 head of elk, whether I'd pull the trigger or not. I can't do that today (FG-5).

In another group, a participant said “our elk herds won’t withstand it anyway, where they’re struggling as it is. And the moose are gone” (FG-7). Others echoed that the concern for ungulates is exacerbated because of the other predators on the landscape Once again, the wolves served as a reference point in many discussions. As one participant said:

> we’re looking at it as it’s just another predator. We know the devastation a grizzly can do. So, don’t look down on us when we’re comparing it to a wolf because we’ve already been through the wolf thing and then we’re saying oh, we went through this, now they’re talking grizzlies? This could get bad (FG-2).

Discussions indicate that previous experiences with the wolf reintroduction are salient factors influencing participants’ negative attitudes towards grizzlies.

There are a number of potential costs that could results from grizzlies reappearing in the BE, contributing to groups’ negative attitudes. For some, grizzlies’ additive impact on ungulate predations would be a non-material cost, as discussions indicated that many participants enjoy the presence of these species. Within some groups, participants indicated some local residents rely on elk as a source of food, signifying a material cost. The additional prey depredations would also introduce both non-material and material costs through decreased hunting opportunities, indicated by the participant who shared, “the depredation from predators has destroyed probably 25 or 30 outfitters that don’t exist anymore so that legacy has- which affects our economy here, which affects the social bearings of this community, what people moved here for” (FG-6). Hound hunters’ livelihoods are also threatened by grizzlies, as “you can’t change how you hound hunt” to accommodate for the presence of grizzlies (FG-2). Discussions also revealed a general consensus about the economic concerns for ranchers because, as one participant said, “grizzlies flat out smoke cattle; they kill sheep” (FG-4). However, it may not be sufficient for agencies and organizations to only acknowledge and compensate for depredations. As one resident stated:

> even if they’re not directly killing cattle, I mean, if they’re harassing cattle, you’ll have lower reproduction rates. You’re not utilizing the grass. There’s a whole slew of issues that come from just pressure that would come from those bears (FG-7).

There are other costs for ranchers that are much more difficult to identify and quantify, especially for those that do not work in the industry.

Overall, group discussions identified a range of potential costs; although there was some variance around how extensive these costs could be, there was collectively consensus that there would be some costs. Madden and McQuinn (2014) state that “conservation conflicts often serve as proxies for conflicts over more fundamental, non-material social and

psychological unmet needs," including recognition, respect, freedom, identity, and security (p. 98). Discussions indicated that participants view grizzlies as a threat to several of these needs, as they would infringe on BE residents' safety and freedom to use the land and threaten their cultural identity. In addition, there would likely be material costs, such as decreased business revenue and livestock depredation. As many participants previously did with wolves, they identified grizzlies (as opposed to management) as the source of blame for these costs, resulting in negative attitudes and intolerance towards the species. Although certain material costs may be easier to identify and address, addressing them alone will likely be insufficient to prevent conflict. If grizzlies continue to reappear in the BE, management agencies and conservation organizations should work to address both material and non-material costs to reduce negative attitudes and intolerance.

Need for Presence in the BE. Many participants questioned why there is a need for grizzlies in the BE. As one resident said:

> is that bear necessarily needed? We have Walt Disneyworld; we have Walt Disneyland. You have to go there to see them. We have grizzly bears in Alaska. We have grizzly bears in Yellowstone. We have grizzly bears in Montana. Where exactly is the need to bring them back in and expand their areas? (FG-6).

In some cases, people think of grizzlies as an attraction that one should be able to choose to interact with as opposed to a native species and an important part of the ecosystem. As a few participants asked, "what is the benefit of the grizzly in a region that it has naturally been thinned out by an apex predator?" (FG-3) and simply, "what's the upside" (FG-2)? Participants indicated a lack of perceived benefits to sharing a landscape with grizzlies. Without any perceived benefits, it seems some residents are left questioning why they should have to endure the distributive injustice of shouldering the burdens of grizzly presence when there are other areas seen as more appropriate for grizzlies. Given that perceived benefits can function as stronger predictors of tolerance than perceived risks, it is important to highlight the benefits of grizzly presence (e.g., their role in the ecosystem) and provide a narrative for why they should be in the BE (Bruskotter & Wilson, 2014). This may be especially important since there will likely always be some costs to the presence of grizzlies, and therefore some enduring negative attitudes.

Tolerance: Grizzlies

When groups were asked how they feel about grizzlies, their responses generally differed from the responses of interview participants. While interview participants expressed attitudes towards grizzlies that ranged the entire spectrum from positive to passive to negative,

attitudes expressed in focus groups generally ranged from passive to negative. The reasons for positive attitudes that interview participants expressed, which aligned with the findings in academic literature (e.g., beautiful, part of the ecosystem), were not expressed by focus group participants. Right to exist and NIMBY opinions expressed in interviews were also expressed in group discussions, also with contingencies. However, in the case of group discussions, there was fluctuating support for these sentiments.

Attitudes towards grizzlies also varied between focus groups with different group dynamics affecting discussions and opinions in diverse ways. For instance, the attitudes in three of the seven focus groups remained consistent throughout. In two groups, it appeared as if some participants were moderating their responses because of the group dynamic, based on some of the participants' other expressed opinions and non-verbal indicators. Attitudes became progressively negative over the course of the other two focus groups. While focus groups are meant to provide collective views, the focus groups with moderated and progressively negative attitudes may be examples of the influence of normative expectations. Bicchieri and Xiao (2009) define a normative expectation as "the belief that *others* expect one to conform to a given norm" (also referred to as a subjective norm (Azjen, 1991); p.192). Participants who started with more passive attitudes towards grizzlies may have withheld or changed their opinion based on a perceived normative expectation within the group. Further research on the influence of normative expectations in predicting behavioral intentions towards and support for carnivores is needed, but some studies indicate that it is a predictor, although of varying strength in different contexts (Jhamvar-Shingote & Schuett, 2013; Langin & Jacobsen, 2012; Marchini & Macdonald, 2012). In the context of this study, the normative expectation would be a participant believing that other participants think they ought to have a negative attitude towards grizzlies, either as a fellow marginalized rural resident or person with a natural resource-based occupation. Further research is needed to clarify the role of subjective norms on BE residents' attitudes about grizzlies.

Relatedly, participants in some groups expressed passive attitudes which align with the interpretation of tolerance by Glikman et al. (2021) where people may express tolerance because they do not feel they have another choice in the situation. One participant stated, "we can deal with a grizzly bear," followed by statements indicating intolerance towards management and restrictions (FG-4). This participant indicated more tolerance towards the grizzly, as they do not have any other option than to 'deal with' a grizzly that wanders into the BE, and less tolerance towards imposed restrictions, as that is a choice made by management. In another group, a participant shared, "as far as physical safety, I've slept in

tents in grizzly country. At least a couple of hundred nights. I've never had an issue" (FG-6). Another participant agreed with this sentiment and said about his time in grizzly territory "we knew what the bleep we were doing. We had no problems" (FG-6). Although groups did not express appreciation for grizzlies as many of those in interviews did, such sentiments indicate tolerance to sharing a landscape with grizzlies.

In one group, initial opinions about grizzlies ranged from passive to slightly negative, such as stating the need for a management plan and "if we can tolerate the effects of them being back here, then maybe move forward with it" (again, an example of reintroduction being used as participant driven language; FG-4). However, later in that group, the opinion shifted to "I say anything over that agreed upon [recovery zone] line needs exterminated" and the use of terminology such as "vermin" to describe grizzlies. This may be an example of when negative opinions from one participant created a perceived normative expectation for other participants, resulting in more negative opinions as an attempt to conform to a perceived norm.

Presence in the BE, Right to Exist, and NIMBY Sentiments. Across groups, there was general consensus that grizzlies have started reappearing in the BE in recent decades (as opposed to some skepticism expressed in interviews). Some groups expressed the opinion that there have historically always been a couple of grizzlies in the BE. One participant shared how "the old timers say there's always been grizzlies around" (FG-2), while another participant said "we've always had grizzlies in this area, the Selway. Not very many of them, but we've always had some, you know?" (FG-5), and a third participant agree with this sentiment stating, "there's been bears here for at least…forever" (FG-6). In the discussions that followed, some groups expressed more intolerance to the belief that management agencies have been lying about grizzly presence in the BE (i.e., declaring that grizzlies have been extirpated) than to the belief that grizzlies have been present. Groups discussed the idea of a few grizzlies historically living in the BE without negative emotions towards the grizzlies, indicating possible passive tolerance.

Despite a lack of positive attitudes towards grizzlies in group discussions, some participants still expressed a belief in their right to exist when considering grizzlies as a species and their future viability. Participants indicated a belief in their right to exist through opinions such as "you want to have some around" (FG-2), "I'll say they got a place and a purpose definitely" (FG-6), and "I wouldn't want to say eliminate them all by any means. I don't believe in that" (FG-5). However, similar to interviews, discussions revealed that the belief in grizzlies' right to exist is nuanced and often dependent upon a location contingency, as was

found by von Essen and Allen (2020) with wolves. One participant expressed this sentiment by stating:

> things need to stay where they've been placed, but obviously not eradicated. You don't need to eradicate anything. But Alaska has a thriving population of grizzly bears. Canada has a thriving population of grizzly bears, the Yaak, most of Montana, Yellowstone (FG-4).

In another group, a participant said, "that's why Yellowstone National Park is there. That's why Teddy Roosevelt designated that land for bison, elk, deer, grizzly bears. If you want to see one, go to Yellowstone" (FG-3). In other groups, the location contingency was more pronounced, indicated by comments such as "they're fine in the zoo" (FG-7). These NIMBY sentiments allow participants to voice support for grizzly conservation and their right to exist, but in a way that eliminates the risk of having to personally experience any burdens or threats. In one group, NIMBY sentiments were expressed in the beginning of the discussion, including the sentiment "love them in the right place" (FG-2). However, by the end of the group discussion, sentiments such as "shoot them all. Shoot them on sight" and "SSS [shoot, shovel, and shut up]" were expressed. Once again, this may indicate the influence of normative expectations, resulting in increasingly negative opinions as an attempt to conform with the perceived norms of relevant others (i.e., other participants), particularly when of a shared social identity (e.g., rural resident). Further research to explore the role of normative expectations in this context may be worthwhile because if residents personally believe in grizzlies' right to exist, this could provide common ground from which to start discussions with residents. Also, identifying the role of normative expectations on BE residents' opinion towards grizzlies could inform what may be the most productive environment for agencies and organizations to engage with residents.

Chapter 6: Conclusion

This research provides exploratory data about BE residents' tolerance towards grizzlies and their management and who they trust and do not trust for grizzly management. Interview and focus group findings can inform future management and conservation efforts if we continue to see a reappearance and potential natural recovery of grizzlies in the BE. As is often the case with large carnivore management, there is the potential for future human-grizzly and human-human conflicts. Incorporating social science research and theories into management and conservation efforts may help mitigate potential conflicts and assist in human-grizzly coexistence in the BE.

In this study, mixed qualitative methods allowed for an in-depth exploration of a complex wildlife management issue. Focus group data reinforced many findings that emerged from the interview data. Although trust has been operationalized in a variety of ways across natural resource management literature, this study identifies some relevant characteristics of trust in the context of grizzlies in the BE and overall highlights the importance of trust for future grizzly management and conservation efforts (Stern & Coleman, 2013). Findings highlight the importance of the two prerequisites to trust- intention to trust and trustworthiness. Focus group and interview data emphasize the influence of local history on the intention to trust. Across the range of participant demographics, wolves served as the main reference point for western BE residents to gauge how future grizzly management might unfold and whether they are willing to rely on agencies and organizations. This creates a context for grizzly management and trust-building that may differ from the regions in north Idaho and parts of Montana that are working towards coexistence with grizzlies. Wolves are a source of fear, resentment, and frustration that have decreased residents' willingness to be vulnerable and created a low degree of tolerance for uncertainty, even for residents whose livelihood is not directly threatened by wolves. Therefore, it may be beneficial for future BE outreach efforts to use a more context driven approach and stress the differences between wolves and grizzlies, including emphasizing that there is no plan for a grizzly reintroduction.

Focus group data also reinforced the findings from interviews about relevance of the constructs of ability, benevolence, and integrity in shaping perceptions of trustworthiness and intentions to trust. Participants across interviews and focus groups expressed similar desires for entities that show benevolence and integrity. A range of participants used the terms 'honesty,' 'transparency,' and 'credibility' to describe integrity, indicating that *how* agencies and organizations operate is a common concern across different demographics. Knowledge was a critical component of ability in both interviews and focus groups, although more

nuanced opinions about knowledge emerged in the focus groups. The importance of local knowledge, in addition to scientific knowledge, was a more salient topic in focus groups. This may be due to the different participant recruitment strategies for interviews and focus groups. Because many interview participants were purposively sampled as key informants and community leaders, there may be channels through which they feel they have a voice. The open community recruitment for the focus groups resulted in a high percentage of participants that work in natural resource-based occupations. As a result, these residents may more highly value local knowledge, more commonly identify as local knowledge holders, and feel more disenfranchised. Incorporating both local and scientific knowledge into the decision-making process may be especially beneficial for a region like the BE, given its expansive and remote nature, and could also serve as a means of engagement and a trust-building mechanism with residents that feel marginalized.

Another finding in both interviews and focus groups was that opinions of tolerance and intolerance apply to both grizzly management and to grizzlies. Participants expressed intolerance to management because many of the residents that would be most affected by grizzlies re-inhabiting the BE feel powerless and that they have no say in management and conservation efforts. Attempts to develop a more equitable and representative constitutive decision-making process may help address this sense of participatory injustice, which is commonly felt because of the perception that outsiders have the decision-making power. Transitioning to local (community based) authority faces major political and bureaucratic obstacles and is impractical for a species like grizzlies whose home range can span hundreds of miles, as it would likely result in disjointed management across a number of jurisdictions. However, there may be merits to a co-management approach which incorporates local, state, federal, and Indigenous perspectives in a joint decision-making process (Berkes, 2009). IGBC's coordination efforts do in fact span these scales. Yet, interview participants and focus groups expressed a lack of local accessibility both for opportunities to engage with staff and opportunities to engage in the participatory process. They also indicated there is an insufficient chain of communication between agencies and the public. Both interview participants and focus groups suggested using a variety of channels for communication, including social media and the local newspapers. Although some interview participants and focus groups expressed interest in town hall style meetings, the possible influence of normative expectations as seen in a few focus groups suggests that format has the potential to amplify antagonism towards both grizzlies and management. A few vocal opponents to grizzlies in the BE may establish a

perceived normative expectation causing other residents to voice progressively negative opinions, preventing a productive sharing of knowledge and co-management.

Discussions for more cooperative co-management efforts could start from a place of common ground, such as the belief in grizzlies' right to exist. Opinions and NIMBY sentiments expressed by both interview and focus group participants suggest this may be a pragmatic starting point. NIMBY sentiments can be frustrating, especially when working to conserve a species that requires huge tracts of habitat, as avoiding 'backyards' creates significant connectivity challenges. Yet, as von Essen and Allen (2020) point out, NIMBY sentiments may originate from legitimate environmental injustice issues. Grizzlies re-inhabiting the BE would disproportionately impact residents in rural BE communities. There would likely be a number of both material and non-material costs, as identified by both interview participants and focus groups. Non-material costs, in particular, may be difficult for agencies and organizations to identify, measure, and address, especially without the recognition and incorporation of local knowledge. More inclusive collaborations with a range of affected publics could help identify a variety of both material and non-material costs that could act as barriers to tolerance. Sufficient inclusivity in collaboration efforts is key though, as simply inviting one or two local representatives assumes that all local residents have homogenous opinions and beliefs. Data from this study indicates that is clearly not the case. Not only do western BE residents have a range of opinions, but they also have nuanced opinions based on situational specifics and contingencies.

The lack of a compelling argument for why grizzlies should be in the BE contributed to intolerance in both interviews and focus groups. Expressed NIMBY sentiments indicate an unwillingness to incur the distributive injustice of the inequitable costs for BE residents, especially when there are healthy populations of grizzlies elsewhere. The BE's potential to provide ecological connectivity to support the long-term viability of grizzlies in the conterminous US could provide a reason for their presence, given that "small, isolated populations are vulnerable to extinction from demographic fluctuations resulting from environmental processes (e.g., poor food years, disease, human-caused mortality) and low genetic diversity due to gene drift and inbreeding" (USFWS, 2022, p. 170). The GYE grizzly population is currently isolated from other populations and is approaching, but has not yet achieved, a population size that would support long-term viability. The CYE is too small to support a population size that would likely avoid negative genetic issues, so connectivity is essential. Ecological connectivity would also help avoid genetic concerns for grizzlies in the SE (USFWS, 2022). The BE could serve as an ecological corridor for grizzlies and could

facilitate ecological connectivity that would increase genetic dispersal for long-term viability. Grizzlies are considered a “conservation reliant” species that will require ongoing interventions and conservation efforts at least for the foreseeable future (Scott et al., 2010). Therefore, a decline in conservation efforts is expected to result in a decline in grizzlies’ viability in the conterminous US, whereas an increase in conservation efforts, such as a natural recovery in the BE, would improve their viability (USFWS, 2022). Further, this connectivity may be helpful in achieving the recovery and ESA delisting of grizzlies in the conterminous US, as a court order (*Crow Indian Tribe v. United States*, 2018) previously relisted the GYE population partially on the grounds of the lack of connectivity and concerns for long-term genetic health. Grizzlies’ long-term viability via a connectivity corridor may provide a compelling reason for why grizzlies should be in the BE, particularly for those that believe they have a right to exist.

The expressed intolerance and tolerance for both grizzlies and management support the broader definition of tolerance by Brenner and Covelli Metcalf (2020) that incorporates attitudes, normative beliefs, and connections to behavior. Attitudes and normative beliefs measure different thoughts and mental processes (Zinn et al., 1998). As shown with this study’s findings, measuring just one will only provide a partial understanding of tolerance and intolerance. Findings from both interviews and focus groups demonstrate that western BE residents’ tolerance towards grizzlies is more complex than just their positive or negative attitudes about the species. A more comprehensive understanding of tolerance also requires looking at situational specifics, which influence some normative beliefs about grizzly management. Residents’ level of tolerance towards grizzlies in the BE depends on a number of situational specifics. For instance, how grizzlies come to be present in the region is relevant. Many participants expressed more tolerance towards their natural recovery than to a reintroduction. What restrictions will accompany their presence is also of importance, as many participants expressed more tolerance towards grizzlies in the BE if delisted from the ESA. If grizzlies continue to reappear in the BE, the acceptability of future management and conservation efforts can be more accurately assessed if residents are provided with situational specifics and if efforts are made to assess both their attitudes and normative beliefs.

While this study provides exploratory data about western BE residents’ opinions on grizzlies and their management, there are some limitations. This study does not provide generalizable results about BE residents. Focus group participants disproportionately represented natural resource-based occupations compared to the percentage of residents in Idaho and Clearwater Counties that work in these industries. However, findings from this study can inform future research on this topic by illuminating themes (e.g., wolves) and points of

confusion (e.g., natural recovery vs. reintroduction) that may otherwise have been overlooked or inadequately addressed in a quantitative survey. Future research could also target communities on the eastern front of the BE for a more comprehensive understanding of opinions among BE residents. Another major limitation is that I was unable to acquire a research permit to include Nez Perce Tribe members in this study and they may have different perspectives based on the cultural significance of the grizzly to the Tribe. Also, Nez Perce Tribe members' perspectives are clearly needed to properly address issues of environmental injustice.

Large carnivore management and conservation are complex issues, and grizzlies re-inhabiting the BE would present a number of challenges. The findings from this study reveal a variety of potential material and non-material costs for local communities, the importance of local context, and a range of opinions and perspectives about grizzlies and their management among western BE residents. These spectrums of costs and opinions indicate that it will likely be impossible to achieve unanimously acceptable outcomes. However, as Jacobsen and Linnell (2016) point out, efforts can be made to establish a more acceptable decision-making process that addresses participatory and recognition injustices. Management and conservation efforts resulting from what is perceived as an equitable and respectful process may foster more acceptable decisions. Contextually appropriate, collaborative co-management strategies starting from a point of agreement, such as the right to exist, should be considered in efforts to facilitate future human-grizzly coexistence in the BE, as coexistence will be key for success and grizzly survival.

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Appendices

Appendix A: University of Idaho Institutional Review Board Approval

University of Idaho
Office of Research Assurances
Institutional Review Board
875 Perimeter Drive, MS 3010
Moscow, ID 83844-3010
Phone: 208-885-6162
Fax: 208-885-6014
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June 03, 2021

To: Kenneth Wallen, PhD

Cc: Katie Shaw, MS Natural Resources

From: University of Idaho Institutional Review Board

Approval Date: June 03, 2021

Title: Grizzly Bears and their Management in the Western Bitterroot Ecosystem

Protocol: 21-129, Reference: 013425

Exempt under Category 2 at 45 CFR 46.104(d)(2).

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for this research project has been certified as exempt under the category listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through VERAS for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement. Please complete the *Continuing Review and Closure Form* in VERAS when the project is completed.

You are required to notify the IRB in a timely manner if any unanticipated or adverse events occur during the study, if you experience an increased risk to the participants, or if you have participants withdraw or register complaints about the study.

IRB Exempt Category (Categories) for this submission:
Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: i. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot

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readily be ascertained, directly or through identifiers linked to the subjects; ii. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or iii. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by .111(a)(7).

Appendix B: Resident Interview Guide

BE Resident Interview Guide for 'Grizzly Bears and their Management in the Western Bitterroot Ecosystem'

Interviewee:
Date:
Location:

Thank you for taking the time to speak with me. I am a graduate student at the University of Idaho in the Natural Resources department. I am doing a study exploring different aspects of tolerance towards grizzly bears in the western Bitterroot Ecosystem and who residents view as trusted people or agencies to manage them. During this interview, I am interested in hearing your opinions about grizzly bears and their management. This interview should take approximately one hour. Everything you say in this interview will be strictly confidential and not shared with anyone beyond my MS committee. Your input will remain anonymous. In order to best analyze data, it would be helpful for me to record our conversation. Are you comfortable with this? If not, please let me know. Do you have any other questions before we begin?

Section 1: Interviewee Background

To start, I would like to ask you some questions about yourself and your background.

1) Are you originally from (town name)?
    a) If yes, how many generations has your family lived here/in Idaho?
    b) If no, where are you from? When did you move to (town name)?
2) What about (town) and this region makes you proud?
3) What makes someone part of this local community?
4) What is your occupation?
    a) If land-based/related to extractive industries, were your family also (occupation)? Have you noticed any changes in (occupation) over the years?
    b) Do you own land?
        i) If yes, how much? What kind of terrain? How long have you owned it for?
5) What are some of your hobbies?

   a) If some type of outdoor recreation is mentioned, how long have you (activity)? How often do you (activity)? Have you noticed any changes in (activity) over the years?
   b) If no type of outdoor recreation is mentioned, are there any outdoor recreational activities that interest you?
6) How do family members, such as parents, grandparents, or others, talk about wildlife and nature?

Section 2: Grizzly Bears and Tolerance

Next, I would like to talk to you about grizzly bears and how they do or do not affect your life.

1) How do you feel about grizzlies?
   a) Probe- Are there any benefits you feel grizzlies offer?
   b) Probe- Are there any risks you feel grizzlies present? Are there any risks that you would be willing to accept? Any you would not be willing to accept?
2) Have you or someone close to you encountered a grizzly bear?
   a) If yes, what happened? Did that influence your opinion towards grizzlies?
   b) If no, do you spend any time in landscapes with known grizzly populations?
3) Do you consider yourself to be well informed about grizzlies?
   a) If yes, what are your main sources of information? Who do you consider to be trusted sources?
   b) If no, do you feel there is no need to learn about grizzlies?
4) What are your thoughts about the natural recovery of grizzlies in the BE?
   a) If land-based occupation, do you think grizzlies in the BE would affect your work as a (occupation)?
   b) If interested in outdoor recreation, do you think grizzlies in the BE would affect (activity)?
5) Are you familiar with the grizzly reintroduction plan that was proposed for the BE in the early 2000s?
   a) If yes, what did you think about that plan? Which alternative did you support?
6) Have you or anyone you know taken any actions for or against grizzlies in the past? For example, signing a petition, supporting a related agency.
   a) If yes, what did you do and what motivated you to take action?
   b) If no, would you potentially do any of these actions in the future? Why or why not?
7) If the Endangered Species Act has not been mentioned, what are your thoughts about grizzlies listed under the ESA?

Section 3: Grizzly Management

Next, I would like to talk to you about your opinions regarding the management of grizzlies.

1) What are your thoughts about wildlife management? What are your thoughts about how grizzlies are managed?
    a) What are your thoughts about federal versus state management?
2) In an ideal world, who would be in charge of grizzly management?
    a) Are there certain people or agencies that you trust? Are there people or agencies that you do not trust? Who in your community would you trust with information and plans about grizzlies?
3) Would you like to be included in the decision-making process regarding grizzly management?
    a) Probe: Do you think local citizens should have a say?
    b) Probe: Who do you think is most influential in the decision-making process regarding grizzlies?
    c) Probe: Do you feel any people or groups are excluded from the decision-making process regarding grizzlies?
4) What specific actions could be taken that would make you feel comfortable with grizzly management?
5) There have been several confirmed sighting of grizzlies in or around the Bitterroot Ecosystem since 2007. Do you think there has been or should be a change in management given these sightings?

Section 4: Closing Demographics

Finally, I have a few other questions about you before we end this discussion.

1) What are a few of your most important values?
2) Do you have children, pets, or livestock?
    a) If children, how old?
3) What is your age?

I appreciate you taking the time to speak with me and share your thoughts. Is there any additional information you would like to add? Thank you again for your time.

Appendix C: Agency/Organization Staff Interview Guide

Agency/Organization Staff Interview Guide for 'Grizzly Bears and their Management in the Western Bitterroot Ecosystem

Section 1: Background Information

1) How long have you worked for (agency)?
    a) What are some of your main roles at (agency)?
2) What is your professional background?
3) What are some of the most significant projects you've worked on with (agency)?
4) How often do you work with the public as part of your job?

Section 2: Grizzly Bears and the Endangered Species Act

1) Were you involved with the grizzly reintroduction plan for the BE in the early 2000s?
    a) If no, what do you know about (agency's) thoughts of it?
    b) If yes, in what way were you involved in it? What were some of the main challenges you witnessed? What was some of the support or successes of the plan that you witnessed?
2) Were you involved with the wolf reintroduction plan?
    a) If no, what do you know about (agency's) thoughts of it?
    b) If yes, in what way were you involved in it? What were some of the main challenges you witnessed? What was some of the support or successes of the plan that you witnessed?
3) In what ways does the ESA make your job more difficult? In what ways does the ESA make your job easier?
    a) What are your thoughts on specific parts of the ESA, such as listing by subpopulation and the "experimental, non-essential" category? How do these affect your job?
4) In an ideal world, what would (agency's) stance on grizzlies be?
    a) In what ways does that differ from (agency's) actual stance?
        i) Probe: Does (agency) prefer grizzly reintroduction to the Bitterroot Ecosystem or natural recovery?

Section 3: Grizzly Management

1) What are some of the most difficult parts of grizzly management/conservation? What are some of the easiest parts?
2) Who do you think has the most power or influence in the decision-making process for grizzly management? Are there any groups or people that you believe are excluded from the decision-making process?
3) How does (agency) work with other agencies or organizations focused on grizzly management or conservation?
4) How has (organization) worked on grizzly conservation in other places outside of Idaho? OR Has (agency) collaborated with other states about grizzly management?
    a) If yes, which states? How does grizzly conservation/management differ in those states versus Idaho? What unique challenges are there to grizzly conservation/management in Idaho?
    b) If no, why not? What obstacles are there to interstate collaboration? Do you think Idaho faces any unique challenges to grizzly conservation/management? If yes, what are they?
5) How does (agency) feel about public involvement in grizzly management?
6) How do you think the public views (agency) in general? In regard to grizzly management?
7) Do you think (agency's) values align with its constituents/local residents?
    a) What do you think are some of the predominant values of Idahoans?
    b) How do you think constituents/local residents view grizzlies?
8) What does (agency) think is the best way to build trust between the public and (agency)?
    a) Have there been any specific instances you can think of that either built trust or distrust?
9) Since the three confirmed cases of grizzlies in or around the BE since 2007, has (agency's) role/stance on grizzlies changed?
    a) If so, how?
    b) If not, why not?
10) What do you/(agency) think are the biggest obstacles to grizzlies successfully re-entering the BE?
    a) Probe: Social concerns? Ecological concerns?
11) What is (agency's) stance on problem bears?
    a) What does (agency) define as a problem bear?

   b) How is a problem bear dealt with?
12) Does (agency) do any kind of educational outreach to the public?
   a) If yes, what kind of outreach? How has it been received? What issues have arisen?
   b) If no, why not?
13) What role do you think grizzly re-inhabitation of the BE could play in overall grizzly conservation?
14) Is there any other information you would like to add?

Section 4: Personal Information

1) What is your age?
2) Where are you originally from?
   a) If Idaho, how many generations has your family lived in Idaho?
3) What are some of your hobbies?
   a) If some type of outdoor recreation is mentioned, how long have you (activity)? How often do you (activity)? Have you noticed any changes in (activity) over the years?
   b) If no type of outdoor recreation is mentioned, are there any outdoor recreational activities that interest you?
4) How did your parents, grandparents, or other family members talk about the environmental and natural resources?
5) What are some of your most important values?
6) Would you be comfortable answering questions about your personal stance on grizzlies?
   a) If yes, what is your opinion on grizzlies?
   b) What do you identify as some of the main challenges of management? What do you identify as successes?
   c) In what ways do you think grizzly management in Idaho may be different than in other states and Canada?

Appendix D: Focus Group Guide

Focus Group Guide for 'Grizzly Bears and their Management in the Western Bitterroot Ecosystem

1. How do you feel about grizzly bears?
   Probe: Benefits? Risks?
2. As mentioned, since 2007 there have been several confirmed cases of grizzlies in and around the Bitterroot Ecosystem. What do you think about grizzlies reappearing in this region?
3. What are your thoughts about the natural recovery of grizzlies in the BE? By natural recovery I mean bears that wander into the Bitterroot of their own accord from either the northern or Yellowstone populations.
4. Does anyone feel differently about reintroduction, which is when bears are captured from other populations and released into the BE?
5. What are your thoughts about grizzlies listed under the Endangered Species Act?
6. Who do you trust for grizzly management?
   Probe: Who do you not trust for grizzly management?
7. Are there any groups or people that you think are excluded from the decision-making process regarding grizzlies?
8. What specific actions could be taken to make you more comfortable with grizzly management?
   Probe: What is the best way for agencies and organizations to communicate with the public?
9. How is management of other predators going in this area? How could it be done better with grizzlies?
10. If you could let the people managing grizzlies know one thing, what would it be?
11. Is there anything we missed?

Appendix E: Codebook for Interviews

Codebook for Interviews			
Trust			
Category/ Theme	**Codes**	**Definition**	**Exemplar Quotes**
Trust	Trustworthy: ability	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to ability stems from being knowledgeable, efficient, capable, and responsive.	"I like the way that Idaho manages. Um, I think that they make choices based on what is sound scientifically, what makes sense for the population, the ecosystem as a whole. Um, and like I said, I think that they do a great job with like upland game birds"
Trust	Trustworthy: benevolence	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to benevolence stems from a belief that the trustee will listen to and be respectful of trustors	"You know, that's one thing. Act like they care- that would be a really great start."

		and act in a caring manner.	
Trust	Trustworthy: integrity	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to integrity stems from being transparent, unbiased, credible, and honest.	“Open communication is the biggest thing, That's probably the biggest thing.”
Trust	Public involvement	Belief that the public/local citizens should be involved in management; inclusion as a means of trust-building	“We're the ones that end up with the consequences of someone else's great idea. So I think we should be at least considered and you know, our concerns addressed in, it could be simple education, but they need to be heard”
Trust	Proactive	A desire to see management plans/preemptive actions (education) before problems arise	“Awareness campaigns are going to be a really important thing to do. Um, and, and being proactive about that,

			um, instead of reactive would be good.”
Trust	Communication	A desire for greater communication about the presence of grizzlies and the management plan; Ways in which management could effectively communicate with local citizens	“If there's grizzly bears in the local area, people, it would be in everyone's best interest to, to let people know that as opposed to them just finding it out on their own… through some form of media, you know, and, and, uh, you know, the, the people that are, that are outdoors people and stuff, I mean, I don't know whether media is the, or maybe, you know, do it on, you know, fish and game's website or something like that, where people are visiting.”
Trust	People/agencies for management	Who is trusted for grizzly management	“I would trust the state at this point. I would trust Idaho state fish and game.”’
Distrust			
Distrust	Untrustworthy: ability	Characteristics that participants identified as problematic in	“They don't have the knowledge, their opinions- Their

		management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Untrustworthiness related to ability stems from being incapable, unknowledgeable, inactive, and not driven by (good) science.	opinions can be skewed. Uh, uh, and they, they just need to stay the heck out of it"
Distrust	Untrustworthy: benevolence	Characteristics that participants identified as problematic in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Untrustworthiness related to benevolence stems from a lack of care and concern and from forcing decisions on residents.	"I don't think they have our best interests in mind. I don't think they care."
Distrust	Untrustworthy: integrity	Characteristics that participants identified as problematic in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness.	"I totally do not trust government to be, um, honest or necessarily forthcoming with facts in these kind of introductions, re-introductions."

		Untrustworthiness related to integrity stems from a lack of transparency, honesty, and credibility, an exclusive management process, biases, self-interest, misuse of funding, and manipulating/being manipulated.	
Distrust	People/agencies for management	Who is not trusted for management	“Nobody trusts the federal government to manage this. You know, unless you are a friends of the Clearwater or defenders of wildlife, then, Yeah, They're great. You know, but that's, that's a very small, extremely liberal, uh, faction of the people.”
Distrust	Wolves	Distrust for management stemming from the wolf reintroduction	“I hope that, again, it isn't used against us and I go back to the Wolf populations”
Distrust	Wolves: same with grizzlies	Distrust for grizzly re-inhabitation because of the belief it will be just like the wolf reintroduction	“The wolves really do reflect what we contend would be the same thing with the grizzly bear”

Distrust	Wolves: not delisted/changing target for delisting	Distrust in management because wolves were not delisted from the ESA when they hit the target listed in the EIS	“For example, wolves in Idaho, they were supposed to, it was supposed to be sustainable at 150 wolves. And by the time they got de-listed, there were 1500.”
Distrust	Wolves: forced upon	Distrust in management because wolves were reintroduced despite opposition from the local residents	“So the Wolf reintroduction again. Yeah. I think most folks, myself included, and see that as the federal government force- forcing their agenda on locals or on the state population in general, because I don't think most people were favorable to it. And, uh, and I think ultimately the folks that live here lost.”
Distrust	Wolves: Lack of transparency/honesty	Distrust from what participants perceived as lies and a lack of communication surrounding the wolf reintroduction	“Like I said, the wolves, they didn't even ask, tell nothing. We just, all of a sudden saw them downtown.”

Grizzly Intolerance			
Grizzly Intolerance	Concern for other species	Intolerance for grizzlies based on the threat they pose to other species, especially ungulates (elk)	“Grizzly bears are one more predator and it's a bigger predator. And I feel like that's just one more thing that our elk herds don't need.”
Grizzly Intolerance	Economic concerns	Intolerance for grizzlies because of the economic impact their presence will have	“Just the impact that it's going to have on outfitting. Um, that's such a complicated issue. We, you know, we're nervous about it, but we, I mean, there's really nothing we can do about it. So I guess in general, I wouldn't say, I wouldn't say it's not like, I'm one of those people where I, I hate grizzly bears, but at the same time, I don't really want them here either.”
Grizzly Intolerance	Need for presence	Intolerance towards grizzlies in the BE because participants don’t think/aren’t sure there is a need for them there	“I mean, do they really need to be in the Bitterroots? Were they really in that much trouble? Uh, I'm skeptical.”

Grizzly Intolerance	Safety	Intolerance towards grizzlies out of fear for own (or their family's) safety	"You know, they, they eat people. They will eat you. I don't think they go and hunt for people, but if there's conflict, I mean, populations of people are incompatible with grizzly bears."
Grizzly Intolerance	Intolerance (general)	General intolerance towards grizzlies not attributed to any particular reason	"I don't need them. I know my wilderness experience doesn't have to include them."
Grizzly Tolerance			
Grizzly Tolerance	Intrinsic Value	Tolerance towards grizzlies based on their perceived value in their own right	"I don't want them to die out, that's for darn sure."
Grizzly Tolerance	NIMBY	Tolerance towards grizzlies as a species but intolerance to their presence in the BE	"I think that they have a place, but like I said, you know, I, I think it's better for them to have like, you know, Yellowstone- they've been there for years."
Grizzly Tolerance	Tolerance (general)	General tolerance/appreciation towards grizzlies	"They're a neat wildlife species. So, you know, my, my feelings for them are generally positive."

Management Intolerance			
Management Intolerance	Outsiders-disconnect/different perspective	Distrust of people who live outside of the local region because they are disconnected from what it's like to live there or have a different perspective than the locals.	"They're not close enough to our citizens in my mind to make a good decision. Most of them making the decisions that the guys on the ground are doing are in DC and they don't have any idea what goes on here. If they remotely think they do, you better check yourself because I'm here when they bring in these different people from Washington DC and to sit there and watch them with their mouth open looking at the landscape, they have no idea. No clue."
Management Intolerance	Outsiders: Live with consequences	Distrust of people who live outside of the local region because they don't have to live with any of the consequences of decisions or the wildlife	"They don't live here. They get a great idea and they move forward with it, but they don't have to deal with the day to day changes. And the consequences."

Management Intolerance	Outsiders: Power	Distrust of people who live outside of the local region who have more power in decision-making than locals	“Unfortunately it's being driven a lot by the public who doesn't have to live in this area. So you'll have somebody in Baltimore, you know, pushing it, their agenda and they don't even know what a Wolf or a bear looks like.”
Management Intolerance	Restrictions: access	Intolerance towards management stemming from concern about land/natural resource access restrictions	“It's not about the bear necessarily. It's about the control, the other things they get to stop that they're really not interested in. It's either more wilderness or it's less road access or less harvest, or, uh, you know, less public access, that sort of thing.”
Management Intolerance	Restrictions: Defense	Intolerance to management (grizzly protections) because participants felt they couldn’t defend themselves or their property without legal repercussions	“If I'm in grizzly country and, you know, you have a hunting season, nothing has special protections when I lose an animal to a grizzly, it's just the way- the way we live.

			You deal with it, you deal with it. But If I lose my horse And the government has told me, I can't, I can't shoot that grizzly. I can't haze that grizzly. He has special protection, more important than you or your horse, you're going to not like that grizzly and the federal government.”
Management Intolerance	Restrictions: Economic concerns	Intolerance to restrictions accompanying grizzly presence out of concern for economic losses	“It's everything that's going to be around the bear that becomes a problem. And now you can't do this and you can't be here a certain time of year and you can't manage this timber.”
Management Intolerance	Restrictions: Hunting other species	Intolerance to management because of concern for future restrictions on hunting other species	“They might want to do away with bear baiting. You know, which is, which is the only way, uh, that black bears in the Bitterroot can be successfully harvested and their numbers can be kept at a level,

			which is, which is conducive to having most conducive, to having elk.”
Management Intolerance	Restrictions: Management	Intolerance to restrictions that impede other natural resource management	“As long as they weren't a tool to shut down, uh, recreating in the forest and, and managing of the forest, but we have to manage forests.”
Management Intolerance	Restrictions (general)	Intolerance to restrictions without specifying a particular type	“But it's always, always, always all the baggage that comes with it. That's the problem, not the animal.”
Management Intolerance	Mismanaged	Intolerance to management based on perceived mismanagement of either other grizzly populations or other species	“Grizzlies. Yeah, it's a disservice to them as well as the people. They're being hideously mismanaged. So it gives people the wrong impression. Uh, and, and it creates undo, you know, angst toward the bear. Uh, I think if they were managed more properly, it would be better for everybody and the bear.”

Management Tolerance			
Management Tolerance	Compensation	A desire to see compensation for damage from grizzlies	“How do we mitigate for any damages they might do?”
Management Tolerance	Defense	A desire to be allowed to defend oneself and one’s property without legal repercussions	“I think the, the stock men, the farmers, the people who live out a little ways need to be free to not go out there and just wholesale kill them, but at least manage anything that becomes a problem and an issue in their own region, you know, they're on their own land with their own stock.”
Management Tolerance	Education	A need for (more) education about grizzlies	“So my point is there needs to be education. I mean, widespread, continual posters, newspapers, whatever, to tell people, if there's going to be bears or deer or anything else around, they need to know how not to lure them and what the dangers are.”

Management Tolerance	Hunting	A need to be able to hunt grizzlies, both to control the population and instill a fear of humans in grizzlies	“We don't have the population, but once, you know, once, if they become established, like they are Wyoming, they need a hunting season.”
Grizzlies			
Grizzlies	Choose no BE	Grizzlies are choosing not to inhabit the BE/find the habitat unsuitable	“If they wanted to be here, they'd be here. But apparently they really, you know, this is not a prime area for them, otherwise they would stay.”
Grizzlies	Endangered Species Act	Opinions on the application of the ESA and grizzlies’ ESA listing	“My personal opinion is that the grizzly bear is- might be “endangered,” there might be a lack of them in some areas. But it’s not endangered everywhere. So to say that they’re an endangered species, I’m not sure anymore that I agree with that.”
Grizzlies	Perception of in BE	Perceptions of if grizzlies have been/are present in the BE	“We already have them here. We already have them

			going in and out and it won't be long before one starts living here."
Grizzlies	Natural recovery	Opinions on natural recovery (as opposed to reintroduction)	"You won't keep those bears from doing what they going to do either. I don't have any harp over that. I just feel like we need to make sure that the public is informed as we can make them about that"
Grizzlies	Reintroduction	Opinions on reintroduction (as opposed to natural recovery)	"I don't want them physically picking them up and putting them in my backyard. No, I don't- that does concern me and yeah, I could see it happening."
Wolves			
Wolves	Can't control numbers	Perceptions of how the wolf population in Idaho is out of control, even despite recent hunting regulations	"Which is interesting how humanity even wiped them out historically. It had to have been through poisons, not through hunting and trapping because now we can't even control their numbers."

Wolves	Economic impacts	Economic impacts from the presence of wolves in the region	“I think they just need to be a little bit better about that than what they were with Wolves, because it was really bad with wolves and living here and knowing people who have had livestock and had livestock or horses killed by wolves. Um, there are times when it's extremely difficult to get anybody to respond to you, to come out and even look at any animal that they know was killed by wolves.”
Wolves	Mismanaged	Perceptions of how the wolf reintroduction was poorly managed/a mistake	“We had wolves here. You didn't- You didn't have them in the numbers that you have. And I think they'd have been a lot better off if they let that happen naturally.”
Wolves	Impacts on other species	Concern for the impact wolves have on other wildlife species, especially ungulates (elk)	“I think my concern with the Canadian gray is one of the things that we saw was that the elk

			population was truly hammered by the wolves. That was a bad thing.”
Wolves	Misperception	Misperceptions about the reintroduced wolves that impact how participants feel about the reintroduction/wolf presence	“The timber Wolf was the normal Wolf that existed in that area originally. Uh, I have had experience with them before, when we were in Alaska. Uh, they are a smaller wolf. They're, uh, not as aggressive.”
Wolves	Predation	Experiences of horses/pets being lost to wolves	“Not a huge fan. Um, you know, I, I lost a, um, three, um, mountain lion hunting dogs to a Wolf attack.”
Wolves	Safety	Perceptions of wolves as a threat to personal safety	“We've all become accustomed to wolves in our backyard. When we see tracks we're fearful and the dogs stay close and then they seem to go away and everybody's happy again.”

Appendix F: Codebook for Focus Groups

Codebook for Focus Groups			
Trust			
Category/ Theme	**Codes**	**Definition**	**Exemplar Quotes**
Trust	Trustworthy: ability	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to ability stems from being knowledgeable, trying to do their best, and successfully managing in other areas.	"The state has done well with the wolf population or wolf management. We may not agree with what the number is or what number should be there but they have been able to manage that and keep a viable population and its expanded to other state."
Trust	Trustworthy: benevolence	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to benevolence stems from a belief that the trustee will listen to and	"Yeah. Yeah. To make, to make people feel like they're, um, concerned with their safety would go a long ways."

		have meaningful conversations with trustors and express a concern for their safety.	
Trust	Trustworthy: integrity	Characteristics that participants identified as desirable in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Trustworthiness related to integrity stems from being transparent, unbiased, credible, inclusive, and honest.	"I just wished that people, these game managers, if you will, straight across the board, would be honest with the public."
Trust	Public involvement	Any indication that participants think the public/local citizens should be involved in management; inclusion as a means of trust-building	"I don't know if they could- you know, the higher ups, if they could start committees or something like that of hound hunters from around the state of Idaho or committees of fishermen from around the state of Idaho and have focus groups and have them run different stuff like-

			or focus groups like this in their areas and you know, a committee for North Idaho and a committee for South Idaho and a committee for East Idaho or something like that. And get general consensus through focus groups.”
Trust	Management plan/proactive	A desire to see management plans/proactive communication before more grizzlies appear in the BE and problems arise	“I think that before Grizzlies are introduced and make it back to this ecosystem, if that's the course of all this, there needs to be some parameters and things figured out of what will be affected before that actually happens.”
Trust	Communication	A desire for greater communication about the presence of grizzlies and the management plan; Ways in which management could	“What about quarterly meetings that come into general areas of let's call it Idaho county, but make it local i.e. Elk city,

		effectively communicate with local citizens	Dixie, uh, Grangeville, where they, um, disperse all collected information that, uh, is pertinent to the residents of this area, you know, just full disclosure of, of the facts? Well, we studied this, we studied that. And here's all everything you need. It can be digital or whatever."
Trust	People/agencies for management	Who is trusted for grizzly management	"We have good conservation officers here."
Trust	Connected	A desire for management that is knowledgeable about and connected to the local region	"And those representatives that we elect are from those regions. So they know firsthand how it's influencing, not only the people and their livelihoods, but the tourism, the recreation, the economics of the

			county or the region as well.”
Distrust			
Distrust	Untrustworthy: ability	Characteristics that participants identified as problematic in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Untrustworthiness related to ability stems from being incompetent, unknowledgeable, inactive, and disconnected.	“Because they’re screwed everything else up to this point, so why should we give them another chance?”
Distrust	Untrustworthy: benevolence	Characteristics that participants identified as problematic in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Untrustworthiness related to benevolence stems from a lack of caring and listening, opposition to local ideas, and selfishness.	“And that's the only time you see action is if a Cougar goes into Pullman or something. Yeah, they're right there. And they get it. But if they're in my backyard, they don't give a damn.”
Distrust	Untrustworthy: integrity	Characteristics that participants identified as	“We don’t trust them because we

		problematic in management agencies/people based on the Mayer et al. (1995) framework for trustworthiness. Untrustworthiness related to integrity stems from a lack of transparency, honesty, and credibility, an exclusive management process, biases, financially driven motives, denying local knowledge, and a refusal to admit mistakes.	know what they're telling us is wrong. Is not right. That's why."
Distrust	People/agencies for management	Who is not trusted for management	"Not the federal government. Yeah. There's such a distrust in the federal government right now, that I think nobody would vote for them."
Distrust	Disregard local knowledge/disconnect	Participants feel their knowledge from living on the landscape is ignored/denied; management is disconnected and	"Don't say, well, they're not here. Even though we know they're here, we've proven they're here. And then they turn

		unknowledgeable about the local region	around and tell us, no, we don't know what we're talking about. But we do, you know, and that's what they said, with the Wolf that you, you don't know what you're talking about. They said the same thing. My wife found a Wolf track and marked it on her arm. And they said, well, doll, that was not a grizzly bear. That was just a melted out elk track. I mean, and that, that is literally what they told her from the US government USDA forest service, wildlife guy."
Distrust	Politics/bureaucracy	Distrust because management is politically driven; management is too bogged down by bureaucratic processes to be effective	"Because all the stuff that we've talked about, the distrust, because its all politics. When you get right

			down to the bottom line, it's all politics."
Distrust	Previous experiences	Distrust in management based on previous experiences/prior management (general/not wolf related)	"It's just been such a disaster and they're continuing to ride this thing right into the ground. So why would I- why should I think they can manage grizzly bears?"
Distrust	Wolves	Distrust for management stemming from the wolf reintroduction in general	"And that's probably the biggest issue there- management- because we ran into the 10j rule with the wolves. And we saw how that went, skewed on us horribly, and I think that's kind of one of the issues you have to look at."
Distrust	Wolves: same with grizzlies	Distrust for grizzly re-inhabitation because of the belief it will be just like the wolf reintroduction	"I was just gonna say the same thing, everybody here, and anybody who cares, even you, know what

			happened with the Wolves. And even though we're not talking about wolves, the same thing will happen with grizzlies. It just will. Their promise to, to be, they will promise one thing. And then they will take 15 years to do something else.”
Distrust	Wolves: not delisted/changing target for delisting	Distrust in management because wolves were not delisted from the ESA when they hit the target listed in the EIS	“It's like the Wolf, they went way past the recovered number before they took them off the endangered species list. So where is that fair to the, the public, the surrounding public? And like I said, a sport-paying sportsmen of Idaho that take it in a the shorts. You know?”
Distrust	Wolves: forced upon	Distrust in management because wolves were reintroduced despite	“So that's what worries me about the grizzlies- the whole grizzly thing,

		opposition from local residents	is it's going to get shoved down our throat just like the Wolves did.”
Distrust	Wolves: money	Participants’ belief that management showed a lack of integrity and only wanted wolves reintroduced for financial reasons	“A news reporter got some emails from the head Fish and Game guys saying we want- to the federal fish and game- we want the wolves in here because we’re going to make money off of it. We’re going to sell wolf licenses.”
Distrust	Wolves: no transparency/dishonesty	Distrust in management from what participants perceived as lies and a lack of open communication surrounding the wolf reintroduction	“They can make all this introductions of Grizzlies and still swear it isn't happening. And that's what they did with wolves. I mean, I think these wolves were physically introduced way before the general public really got a hand on it and knew how much was going on.

			That's my view. And it could happen with the Grizzlies if it hasn't already.”
Grizzly Intolerance			
Grizzly Intolerance	Concern for other species	Intolerance for grizzlies based on the threat they pose to other species, especially ungulates (elk)	“You put another apex predator in here, what’s it going to be like? The elk are almost gone here. The moose I haven’t seen in 5 years. I used to see them at my house every day. They’ve annihilated moose, I don’t know why they aren’t on the endangered species here. And they want to let these animals back in here? It’s not going to work.”
Grizzly Intolerance	Economic concerns	Intolerance for grizzlies because of the economic impact their presence will have	“A lot of ranchers are concerned about what's going to happen to their livelihood, you know, cause they do take cows or

			calves, horses, you know?”
Grizzly Intolerance	Grizzly = wolf	Intolerance towards grizzlies in the BE because participants think they will cause the same problems as the wolves/exacerbate the wolf problems	“We’re looking at it as it’s just another predator. We know the devastation a grizzly can do. So don’t look down on us when we’re comparing it to a wolf because we’re already been through the wolf thing and then we’re saying oh we went through this, now they’re talking grizzlies? This could get bad.”
Grizzly Intolerance	Safety	Intolerance towards grizzlies out of fear for own (or their family’s) safety; intolerance towards diminished freedoms because of safety concerns	“If you get grizzlies here, you better put a fence up around this school.”
Grizzly Intolerance	Need for in BE	Intolerance towards grizzlies in the BE because participants don’t think/aren’t sure there is a need for them there	“The big question is why? Why do they feel this is important to reintroduce them or recover them? Why?”

Grizzly Intolerance	Intolerance (general)	General intolerance towards grizzlies not attributed to any particular reason	“We don't need no grizzly bears.”
Grizzly Tolerance			
Grizzly Tolerance	Intrinsic Value	Tolerance towards grizzlies based on their perceived value in their own right	“I wouldn't want to say eliminate them all by any means. I don't, I don't believe in that.”
Grizzly Tolerance	NIMBY	Tolerance towards grizzlies as a species but intolerance to their presence in the BE	“That's why Yellowstone park is there. That's why Teddy Roosevelt designated that, that land for, you know, bison, elk, deer, grizzly bears, bears. If you want to see one go to Yellowstone.”
Grizzly Tolerance	Tolerance (general)	General tolerance towards grizzlies	“But as far as physical safety, I’ve slept in tents in grizzly country. At least a couple hundred nights. I’ve never had an issue.”
Management Intolerance			

Management Intolerance	Outsiders-disconnect/different perspective	Distrust of people who live outside of the local region because they are disconnected from what it's like to live there or have a different perspective than the locals.	"People sitting in DC can pull this up, or New York City or Chicago and say, oh my God a grizzly bear got killed in the Selway Bitterroot, what's just terrible. Do they know why? They don't ask the question why. Could it have been cattle issue, got on a ranch on the Salmon, that they transferred out of. It's the local folks that have the capability to understand what is best for the local area. Granted the forests are federal forests, they are everybody's forests. But the management of those forests are not being managed appropriately from Washington DC."

Management Intolerance	Outsiders: Live with consequences	Distrust of people who live outside of the local region because they don't have to live with any of the consequences of decisions or the wildlife	"We have to deal with it. You get to sit up on your- at your desk and go it would be so cool to have grizzly bears back in the area, but we- we're where the rubber meets the road."
Management Intolerance	Outsiders: Power	Distrust of people who live outside of the local region who have more power in decision-making than locals	"I don't think they need to be on the endangered species list in this country, but all the pressure comes from people in other places and you know that, uh, who don't live here and they don't have to put up with what we do."
Management Intolerance	Restrictions: access	Intolerance towards management stemming from concern about land/natural resource access restrictions	"Grizzly bear here. They're going to do the exact same thing. They're going to say there's grizzly bears in this area and we have the right- we have to protect them because of the

			ESA. Therefore, we will gate all of these roads to protect them."
Management Intolerance	Restrictions: Defense/shooting	Intolerance to management (grizzly protections) because participants felt they couldn't defend themselves or their property without legal repercussions; concern about severe legal repercussions	"And not have a lot of ability to protect ourselves under the endangered species act...or our stock."
Management Intolerance	Restrictions: Economic concerns	Intolerance to restrictions accompanying grizzly presence out of concern for economic losses	"Well, we can't have a timber sale because now we're shutting it down because of Grizzlies."
Management Intolerance	Restrictions: Hunting other species	Intolerance to management because of concern for future restrictions on hunting other species	"So now, if we start having grizzlies show up in the area, what's the first thing they're going to do? They're going to shut down hound hunting, they're going to shut down baiting."

Management Intolerance	Restrictions: Management	Intolerance to ESA restrictions that impede effective management	“Their hands are tied with the Endangered species act. There's really nothing they can do.”
Management Intolerance	Restrictions (general)	Intolerance to restrictions without specifying a particular type	“Well I’ve got several comments about that now as the regulations it brings in and the effects with human interactions is where we end up with a problem”
Management Intolerance	Intolerance (general)	Intolerance to management in other areas or anticipated management of grizzlies	“I guess it depends on how they're going to be managed is the big impact of how I will say I feel about them. Speaker 2: Or lack of managed.”
Management Tolerance			
Management Tolerance	Collaboration	A desire for a collaboration between stakeholders for management	“I think a collaborative group could have some serious clout and management capabilities. It

			would be bringing together the federal agencies, it would be bringing together the state, it would be bringing together local public entities and that collaborative group would have the ability to hopefully manage those species whether it be bear or anything else without the threat of litigation, outside litigation."
Management Tolerance	Local power	A desire for local authorities to manage grizzlies and for the local residents to have a voice	"But people on the ground that have skin in the game should be the ones determining how that area or that species is managed."
Management Tolerance	Education	A need for (more) education about grizzlies	"Public safety is- you're going to need a lot of education of people that are using either the North Fork or the

			land that we manage.”
Management Tolerance	Hunting/delisted	A need to be able to shoot grizzlies, whether in defense of self or property, as population control, or to instill a fear of humans in grizzlies	“No, I just said, it'd make me feel more comfortable if I need to could shoot one. Not that I want to, but I dang sure will if it's me or him.”
Grizzlies			
Grizzlies	Endangered Species Act	Opinions on the application of the ESA, whether grizzlies are listed under the ESA, and whether they should be listed under the ESA	“There’s so many grizzlies in Canada, Alaska, Wyoming, Montana, Colorado. And apparently they’re around here too. How can they be on the endangered species list?”
Grizzlies	Perception of in BE	Perceptions of if grizzlies have been/are present in the BE and perception of plans to reintroduce grizzlies	“When I’ve got a picture of them on my bear bait, it’s pretty hard to say it’s not a grizzly. So you know, that’s what I was getting at. Were they truly extinct or were they actually here and Fish and Game

			isn’t fessing up to the fact that they’re actually here until people started getting the technology, like trail cameras and things like that, and getting pictures of them.”
Grizzlies	Natural recovery	Opinions on natural recovery (as opposed to reintroduction)	“You know, there are a couple here that pass through, but they, they just pass through. And you know, we don't have a lot of problem there, but if anybody really wants to put things here, they're asking to endanger a lot of people.”
Grizzlies	Reintroduction	Opinions on reintroduction (as opposed to natural recovery)	“I think people would feel a lot more at ease if they knew they weren't going to be reintroduced.”
Grizzlies	Slippery slope	Concern that allowing a few grizzlies will lead to either a reintroduction or an overpopulation	“So if we allow that one bear to come in here, and then 2 and 3 and 4 and 5,

		where they aren't delisted for decades	if we allow it and we don't stand up and speak what we- our feelings are, and what we thought is impacting us, the next thing you know they will- it gives them an excuse to introduce. It's going to give them the excuse that oh now we can bring over 50 pairs and there's nothing these people can do about it."
Wolves			
Wolves	Economic impacts	Economic impacts from the presence of wolves in the region	"I know we're not here to talk about the wolves but before they introduced the wolves, we used to have thousands of hunters come in here. They used to support our businesses and they used to buy food and drink and

			do whatever in town. Now maybe we have hundreds.”
Wolves	Mismanaged	Perceptions of how the wolf reintroduction was poorly managed/a mistake	“If they- when they brought those wolves here, if they’d have pulled them off the endangered species list, brought in the packs that they brought, and opened it to hunting and trapping, we may have been able to keep a dent in it and maintain it.”
Wolves	Impacts on other species	Concern for the impact wolves have on other wildlife species, especially ungulates (elk)	“When the wolves came in or out, well, the Lolo zone went from 16,000 down to 1000 elk, you know? And, and the same here, I mean, there's a little herd around town, but last year I hunted for two weeks, 10 miles from here and I

			didn't see an animal.”
Wolves	Misperceptions	Misperceptions about the reintroduced wolves that impact how participants feel about the reintroduction/wolf presence	“We already had wolves here before they reintroduced the Canadian wolf. Been here all my life. I’ve seen them and I bet you most people here have seen them. They rarely ran in packs. You’d rarely see 2 together and if you did it was just during breeding season. That’s the way the prairie and timber wolf run. They bring these wolves in. These wolves run in packs of 20, 25, 45, 65, and more and they killed all the native wolves we had.”
Wolves	Safety	Perceptions of wolves as a threat to personal safety	“I went out huckleberry picking on the ridge. And 3 wolves came right in on top of me. I mean some of

			them were within 30 feet.”